

ENVIRONMENTAL & SOCIAL MANAGEMENT FRAMEWORK (ESMF)

for the

OECS Regional Health Project (P168539)
Grenada

June 2019

EXECUTIVE SUMMARY

The Government of Grenada is collaborating with the World Bank Group (WBG) to develop a health project with the objectives to support ongoing initiatives aimed at strengthening the Health Systems to achieve the sustainable development agreed for the health sector, including universal health coverage for all. The project will invest at six million US dollars and aims to build climate resilience and improve preparedness in the health system to respond to public health emergencies.

The project is divided into three components as summarized below.

Component 1: Improved Health Facilities and Laboratory Capacity will support strengthening of Health Facilities Infrastructure and Referral Networks as well as support investments in the laboratory network to enhance efficiency and effectiveness of service delivery. It will focus on building resilience in health facilities baseline by the PAHO/WHO Model for Smart Health Facilities. In this regard five (5) healthcare facilities will be retrofitted according to the Smart healthcare Facility Standard. This component will also invest in improving the infrastructure and operation of public health laboratory network through technology upgrade for laboratory equipment, professional development of laboratory staff, improvement of the surveillance network and development of the quality assurance standards.

Component 2: Strengthening Public Health Surveillance and Emergency Management, will support investment to strengthen public health systems for preparedness and response, including improvements to surveillance systems, and capacity of the system to respond to national, regional and public health emergencies of international concern. Activities under this component will include support for Basic Field Epidemiology training, and strengthening surveillance systems and infrastructure for International Health Regulations compliance. It will also strengthen the national emergency response management systems and health emergency operations coordination and response systems.

Component 3: Institutional Capacity Building, Project Management and Coordination, will support project implementation and invest in ensuring that the critical infrastructure is available for the management of the project in Grenada. It will allow for specific capacity building activities for the Ministry of Health, to include technical assistance for project co-ordination, change management, and for the monitoring and evaluation of project activities. It will also finance equipment for the operation of the project office and related project management activities.

The precise location of some activities were not known at the beginning of project preparation, as such this Environmental and Social Management Framework (ESMF) was created to present the details of agreed policies and procedures, implementation roles and responsibilities for managing the Government's safeguard responsibilities, the framework describes the general approach that will be followed to avoid or mitigate any negative harms arising from project activities.

The activities are not expected to lead to significant negative environmental impacts, nonetheless there are potential negative impacts associated with small civil works during construction and refurbishment, impacts associated with medical waste management during operation, vector control activities during any outbreak control activity, and specific environmental and social concerns may arise from new facility construction or expanding the footprint of existing facilities.

These are all addressed using the Banks Policy 4.01 and this document which provides of a generic list of potential harms with mitigation measures, alongside any Best Management Practices (BMPs) and standard contract clauses for small civil works (Appendix 1), and a pre-design screening tool (in section 5.1) to identify any special conditions requiring additional mitigation measures.

Medical waste management is addressed by provision of Terms of Reference (TOR) to develop a Health Care Waste Management System (HWMS) during the early stages of implementation.

ACRONYMS AND ABBREVIATIONS

BMP	Best Management Practice
CARICOM	Caribbean Community
CARPHA	The Caribbean Public Health Agency
EHD	Environmental Health Division
EIA	Environmental Impact Assessment
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
EMS	Emergency Medical Service
EMT	Emergency Medical Technician
EOC	Emergency Operations Centre
GRM	Grievance Redress Mechanism
GRS	Grievance Redress Service
GSWMA	The Grenada Solid Waste Management Authority
HEOC	Health Emergency Operations Center
HIS	Hospital Safety Index
IHR	International Health Regulations
ILO	International Labor Organization
MCH	Maternal and Child Health
MOHSSIB	Ministry of Health, Social Security and International Business
NAWASA	National Water and Sewage Authority
NEC	National Environmental Commission
NaDMA	National Disaster Management Agency
NEP	National Environment Policy
NGO	Non-governmental Organisation
OECS	Organisation of Eastern Caribbean States
OP	Operational Policy
PPU	Physical Planning Unit
PPDB	Physical Planning and Development Board
PAHO	Pan American Health Organisation
PIU	Project Implementation Unit
UN	United Nations
WBG	World Bank Group

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1.0 INTRODUCTION

The Government of Grenada (GOG) with the assistance of the World Bank Group (WBG) is developing the OECS Regional Health Project to assist with the rehabilitation and resilience activities currently underway within the health sector through its Ministry of Health, Social Security and International Business, guided by the vision of "An integrated, responsive sustainable health system that is positioned to respond to current and future needs"

The development objectives for this OECS regional health project, with Grenada as one of the participating countries, are to improve preparedness capacities of health systems for public health emergencies. This for Grenada will help to build resilience in the health system by investing in climate resilient infrastructure, to advance social development and citizen well being thus advancing universal access to a system of quality healthcare, and economic transformation.

The project investments will be distributed across the following three components, as described below:

Component 1: Health Facilities and Laboratory Capacity Investments

This component will continue infrastructural development work began in 2015 through implementation of the Smart Healthcare Initiative. This project funded by the government of the United Kingdom through the Department for International Development/UK Aid (DFID/UKAID) and implemented with technical assistance from PAHO is designed to strengthen the resilience of health infrastructure through both infrastructural and operational upgrades to ensure the delivery of healthcare services before during and after any hazard event, and mitigates the risks linked to climate change. The investment in Smart Health Facilities - structurally safe, green, and maintained - supports the delivery of quality patient centered primary healthcare services and the Sustainable Development Goal of Universal Health Coverage.

Facilities identified for refurbishment and infrastructure upgrade are:

1. Mt. Gay Psychiatric Hospital, facility upgrades and equipment
2. General Hospital Isolation Room (s), operating theatre suite and related infrastructure
3. General Hospital - Rathdune Acute Psychiatric Facility - retrofit the acute care psychiatric inpatient unit
4. Sauteurs Health Center
5. St. David Health Center -including nurse's quarters and maternity unit.

It is proposed that after investments each of these facilities would have attained the A70 Standard and designated as Smart Healthcare Facilities, that is, the structural resilience would be assessed an A on the scale of A to C, as outlined in the Hospital Safety Index (HSI) Assessment and the Environmental Awareness which reduces the impact of the facility on the environment would be at minimum 70 on the Smart Hospitals Green Checklist Scorecard (1 - 100). Further, that each facility will have designed site-specific energy and water conservation plans, with an action plan to sustain the smart healthcare designation through a preventative maintenance programme.

This component also supports investments in the upgrade of the public health laboratory infrastructure as a mechanism to support the regional laboratory infrastructure and response to public health emergencies, given recent experience with outbreaks of new and re-emerging diseases such as Zika, Chikungunya and measles in the Caribbean and OECS sub-region, and measles in other regions of the Americas. Activities will include the procurement of equipment and reagents, upgrade of systems to

manage specimens and primary healthcare supply chains for laboratory services, technical support for interoperability of existing health information and laboratory information management systems, and strengthening of laboratory quality management systems. The project will also provide support for the development of a national training program for medical technologists in Grenada, as well as skills development for existing laboratory personnel to address existing gaps in the human resource capacity for managing essential public health laboratory functions.

These country initiatives with support and collaboration of CARPHA on agreed regional interventions are expected to ensure the necessary systems are available to allow the appropriate and effective response respond to national, regional and international public health emergencies.

Component 2. Strengthening Public Health Surveillance and Emergency Management (Disaster Preparedness, and Response)

This component will support efforts to strengthen public health preparedness, including surveillance and response through improvement of national and regional capacities and promotion of cross-border collaboration. It will strengthen reporting infrastructure for surveillance activities as well as preparedness and response, including the coordinating mechanisms for emergency health services.

The Project will strengthen public health surveillance with focus on investments in health information systems for IHR compliance, Basic Field Epidemiology for surveillance and management. Preparedness and Response will also be addressed through this component. Activities will support strengthening of national emergency response systems to include the establishment of isolation facilities; to ensure appropriate containment capacity to address weakness with respect to IHR compliance, the development of a Health Emergency Operations Center (HEOC) to include protocols, procedures and equipment.

Component 3: Institutional Capacity Building, Project Management and Coordination.

This Component supports project implementation efforts, including project management, fiduciary tasks and monitoring and evaluation (M&E). This component would involve capacity building activities for staff of the Ministry of Health, monitoring and evaluation, and project management costs associated with supervision of the project.

The institutional arrangements for managing the social and environmental safeguards are described in section 6.0 Institutional Arrangements.

1.1 Purpose and Scope of ESMF

As the details of the site locations are not completely settled an Environmental and Social Management Framework (ESMF) is required to show the potential impacts and how they will be managed. Activities with the potential for significant negative environment and social impacts are not expected, however, if any are identified this will require that subproject-specific environmental and/or social assessment to be prepared and subjected to review and approval by the WB. All proposed activities will be subject to environmental screening to decrease potential negative impacts through analysing design alternatives and to avoid or mitigate negative impacts. The tool for screening is in section 5.1 below.

This ESMF document was developed to identify how anticipated risks can be managed in line with the WB safeguards and global good practice. The ESMF also serves as a public document to inform stakeholders which is an opportunity to improve the project by getting stakeholder feedback on relevant concerns or issues.

2.0 LEGAL AND REGULATORY FRAMEWORK

2.1 National Regulatory Framework

Current legislation of most relevance to the present project and how they are aligned to the WB's standards are summarised below.

Area	Sections of County laws and policies relevant to this project	Corresponding WB policy and standard
EIA Scope	Physical Planning and Development Control Act 23 of 2016 sec 22	OP. 4.01 and annexes
Public health law		
Cultural heritage protection and procedures during construction	Physical Planning and Development Control Act 23 of 2016 sec 38 CAP 204 National Heritage Protection Act No 18 1990 Amended by SRO 22 of 2009 National Trust Act 207 of 1967	OP. 4.11 Cultural Heritage
Vector control pesticide procedure	Pesticide Control Act N0.28 1973 Amended by Act No, 88 1979	Op 4.09. Pest Management, BP 4.01 annex B
Waste Management Act	Cap 334 A Waste Management Act No. 16 of 2001	
Solid and liquid waste management		
Occupational health and safety	CAP 100 Factories Act No. 22 of 1973	
Labour	Department of Labour Act /Employment CAP 89 Act No.14 of 1999	
Labour Relations	CAP 157 A Labour Relations Act No.15 of 1999	
Land acquisition	CAP 159 Land Acquisition Act Amended by Act No. 16 of 1991 Act No. 20 of 1998	OP 4.12 Involuntary Resettlement
Building code and standards	OECS Building Code and Standards/Grenada Building code	
Zoning regulation		
Grievance redress Mechanism/complaint handling	Grievance Redress Mechanism- OECS regional Health Project -Grenada	
Protection of wildlife	Birds and other Wildlife Protection Act Cap 34 1957 Amended by Act N0, 10 of 1990	
Public consultation for social and Environmental Impact Assessments		OP 4.01

2.2 Environmental and Social Management Capacities

Ministry of Health, Social Security and International Business

The Environmental Health Division (EHD) of the Ministry of Health, Social Security and International Business (MOHSSIB) is mandated by law to monitor several aspects of environmental health management in Grenada. The functions of the division are supported by various public health laws and regulations, which require the division to regulate, investigate and institute requisite measures in relation to sanitation, food safety, water and air quality, wastewater management, occupational health and safety and vector control. The division also has the mandate to review building plans in collaboration with the Physical Planning Unit of the Ministry of Infrastructure Development and Implementation. To full fill its mandate the department is represented on the Board of Directors of related statutory bodies, and Government agencies including the National Water and Sewage Authority (NAWASA), the Grenada Ports Authority and the Grenada Solid Waste Management Authority (GSWMA).

The EHD works in collaboration with other divisions within the Community Health Department, including the Health Promotion and Community Nursing and Health Administration to administer the programmes for prevention of communicable diseases, and public awareness programmes, and is also a key stakeholder on matters related to International Health Regulations (IHR) compliance. The EHD also plays a leading role on and serves as the focal point for the Ministry on matters related to climate change and health.

Ministry of Infrastructure Development, Public Utilities, Energy, Transport and Implementation: Physical Planning Unit.

The Physical Planning Unit (PPU) regulates planning and physical development of public and private land in Grenada as mandated by the Physical Planning and Development Control Act 23 of 2016. The Unit is responsible for forward planning and development control and through, review and approval of building and development plans, enforcement of Building Code and Guidelines, enforcement of National Physical Plan and prevention of illegal developments. The law and regulations mandate that all building applications are reviewed by the unit to ascertain their structural integrity, to safeguard the public interest and the health and safety of all citizens. In this regard, all land development activity requires written permission from the authority.

The law and associated regulations also serve to protect and conserve the natural and cultural heritage of Grenada. In this regard, the unit functions as the national service for the identification and protection of heritage and may designate Heritage Conservation Areas. Where applicable, the PPU may require environmental impact assessments from the applicant before permission is granted for development.

The Ministry of Climate Resilience, the Environment, Forestry, Fisheries, Disaster Management and Information

This Ministry serves as the lead ministry for matters related to climate change and spearheads in collaboration with other line ministries country commitments with respect to international agreements and conventions related to climate change and protection of the environment. This Ministry has led for example, the development of the National Climate Change Adaptation Plan, and is actively engaged in the development of marine protected areas and forestry and fisheries management. It is also the lead

agency for disaster management, as executed through the National Disaster Management Agency (NADMA).

Caribbean Public Health Agency

The Caribbean Public Health Agency (CARPHA) is a regional CARICOM institution and serves as the lead agency on public health matters which require a regional planning and response. In this regard CARPHA serves as the regional reference laboratory on matters including water quality. CARPHA as a regional response mechanism also leads emergency responses to disasters including hurricanes, earthquakes and floods. The Agency plays a key role in epidemiological surveillance including the surveillance and management of non-communicable diseases (NDCs), communicable diseases (CDs), including HIV/AIDS and new and re-emerging diseases, like tuberculosis in association with HIV/AIDS; and new communicable diseases that are now endemic in the region, such as Zika and Chikungunya. It also monitors the prevention of injuries, violence and job related illnesses, and contributes to global health agreements and compliance with international health regulations.

CARPHA is the Caribbean Region's collective response to strengthening and reorienting our health system approach so that we are equipped to address the changing nature of public health challenges. The approach is people-centered and evidence-based and the agency works closely with various departments within the Ministry of Health, Social Security and International Business including the Public Health Laboratory, the Epidemiology Unit and the Environmental Health Division.

Grenada Solid Waste Management Authority

The Grenada Solid Waste Management Authority (GSWMA) is a statutory body constituted by Act No. 11 of 1995 and amended by Act No. 30 of 1995. The act provided the mandate for the Authority to assume responsibility for solid waste - domestic, institutional and commercial - collection and disposal throughout the state of Grenada. The authority is responsible for the management of the Perseverance Landfill in Grenada, and the Dumfries Landfill, Carriacou. It also manages street cleaning services in the six towns in the state of Grenada.

The National Disaster Management Agency

The National Disaster Management Agency (NaDMA) is a department of the Office of the Prime Minister. NaDMA is lead agency for management and co-ordination all disaster-related activities on Grenada, Carriacou and Petite Martinique. The agency seeks to develop a culture of disaster preparedness among the population to reduce loss of life and property by ensuring adequate preparedness, response, and mitigation measures are in place to deal with any hazard event.

Labour Relations and Occupational Health and Safety Department

The Ministry of Labour is responsible for the management of labour relations in Grenada. The Ministry aims to provide efficient and effective Labour Administration practices for sustained socio-economic development. Key objectives of the Ministry in pursuing this mandate include strategies:
To provide advisory services to Trade Unions, Employees and Employers
To encourage and promote collective bargaining as the machinery for voluntary negotiation between employers and workers.

- To provide efficient conciliation and mediation services for dispute resolution.
- To undertake Labour Legislative reforms.
- To ensure a functional and effective Employment Service.
- To carry out labour inspection services in accordance with existing legislation.

- To promote National Development Policies

Issues related to occupational Health and Safety are included in the mandate of this Ministry of Labour.

2.3 World Bank Safeguard Policies

The World Bank projects and activities are governed by Operational Policies (OP), which are designed to ensure that the projects are economically, financially, socially and environmentally sound.¹ The World Bank's policy on Environmental Assessment (OP 4.01) is used to identify, avoid, and mitigate the potential negative environmental impacts associated with Bank lending operations. This policy is considered to be the umbrella policy for the Bank's "environmental safeguard policies", which among others include: Natural Habitats (OP 4.04), Forests (OP 4.36), Pest Management (OP 4.09), Physical Cultural Resources (OP 4.11), and Safety of Dams (OP 4.37). The Bank's "social safeguard policies" include Involuntary Resettlement (OP 4.12) and Indigenous Peoples (OP 4.10).

Under OP 4.01, the Bank will undertake environmental screening of each proposed project to determine the appropriate extent and type of environmental assessment required. Proposed projects are classified into one of four categories, depending on the type, location, sensitivity, and scale of the project and the nature and magnitude of its potential environmental impacts. The categories of potential environmental impacts are classified as A, B, C and FI. This project is classified as Category B, summarized in the box below, meaning that environmental impacts for the type of works anticipated under the project are expected to be moderate to minimal in nature and can be readily managed through the application of appropriate and well-established engineering and management measures.

Category	Description
Category B	Category B project has potential adverse environmental impacts on human populations or environmentally important areas, including wetlands, forests, grasslands, and other natural habitats - which are less adverse than those of Category A projects. These impacts are site specific; few, if any of them, are irreversible; and in most cases mitigation measures can be designed more readily than for Category A projects.

The World Bank Safeguard Policy OP 4.01 requires that an Environmental and Social Management Framework (ESMF) be prepared along with an Environmental and Social Management Plan (ESMP) to guide the project's screening of project risks and its implementation of recommendations which will reduce those risks. This program-level ESMF includes guidance during project execution for screening possible sub-projects (i.e., individual civil works or other project-related activities) and identify complex projects which would require additional studies to comply with safeguards policies. All future subprojects which are as yet not identified in detail are included within this single ESMF document and will be incorporated into the Project Operations Manual (POM) to serve as a guide for environmental management of future subprojects or activities once they are defined in sufficient detail for execution. The ESMF as a public document, serves to inform stakeholders and guide environmental management of activities to be implemented.

The other World Bank Safeguard Policies dealing with natural habitats, physical cultural resources, pest management, and forests will not be applicable to the Grenada OECS project. The policies are

¹Source: <http://www.worldbank.org/opmanual>

described briefly below to guide MOHSS assessment of sites during pre-design screening (see Section 5.1).

Natural Habitats (OP/BP 4.04) strictly limits the circumstances under which any Bank-supported project can affect or alter natural habitats (land and water areas where most of the native plant and animal species are still present) as well as parks, natural areas, or other declared protected areas. Projects must avoid, minimize, restore, or offset any activities that cause degradation of natural habitat. Projects that would cause significant conversion or degradation of critical natural habitat (legally protected areas, or those with high conservation value) are not eligible for funding.

Physical Cultural Resources (OP/BP 4.11) seeks to avoid, or mitigate, adverse impacts on cultural resources (movable or immovable objects, sites, structures, groups of structures, and natural features and landscapes that have archaeological, paleontological, historical, architectural, religious, aesthetic, or other cultural significance) from development projects that the World Bank finances. In addition, as a standard practice, a chance-find procedure is required for all projects with earth-moving activities (excavation, trenching, grading, or plowing) to stop work and notify authorities to prevent damage or destruction of these resources if encountered.

Indigenous Peoples (OP 4.10) The Bank provides project financing only where free, prior, and informed consultation results in broad community support for the project by Indigenous Peoples who are affected by the project. Such Bank-financed projects include measures to (a) avoid potentially adverse effects on the Indigenous Peoples' communities; or (b) when avoidance is not feasible, minimize, mitigate, or compensate for such effects. Furthermore, Bank-financed projects must be designed to ensure that the Indigenous Peoples receive social and economic benefits that are culturally appropriate and gender and intergenerationally inclusive.

Involuntary Resettlement (OP 4.12) For the purposes of this policy, "involuntary" means actions that may be taken without the displaced person's informed consent or power of choice. The Bank's policy requires that projects avoid, minimize, or otherwise mitigate land acquisition and associated adverse impacts. Where resettlement is deemed unavoidable, the project must assist all affected people to improve, or at least restore, incomes and living standards

The PIU must screen all potential facility sites, for potential risks using the screening tool in this document (section 5.1). Because this project is a category B project, any activity that could be categorized as category A will be screened out.

3.0 DESCRIPTION OF EXISTING ENVIRONMENT

3.1 General Context

Grenada is small island developing state (SIDS) and is the southernmost country in the Windward Island chain of the Caribbean. It is located at 12 degrees, North latitude by e by 64.47 degrees west longitude. The country comprises three islands, the largest of which is Grenada followed by Carriacou and Petite Martinique. Grenada is approximately 33 km long north to south and approximately 14 km wide, along the east west axis, and occupies approximately 344 square km of land area. By contrast, Carriacou and Petit Martinique cover approximately 34 and 2.36 square km respectively.

Grenada has a mountainous terrain with a forested interior with a tropical climate. The total population is approximately 112, 000 inhabitants.

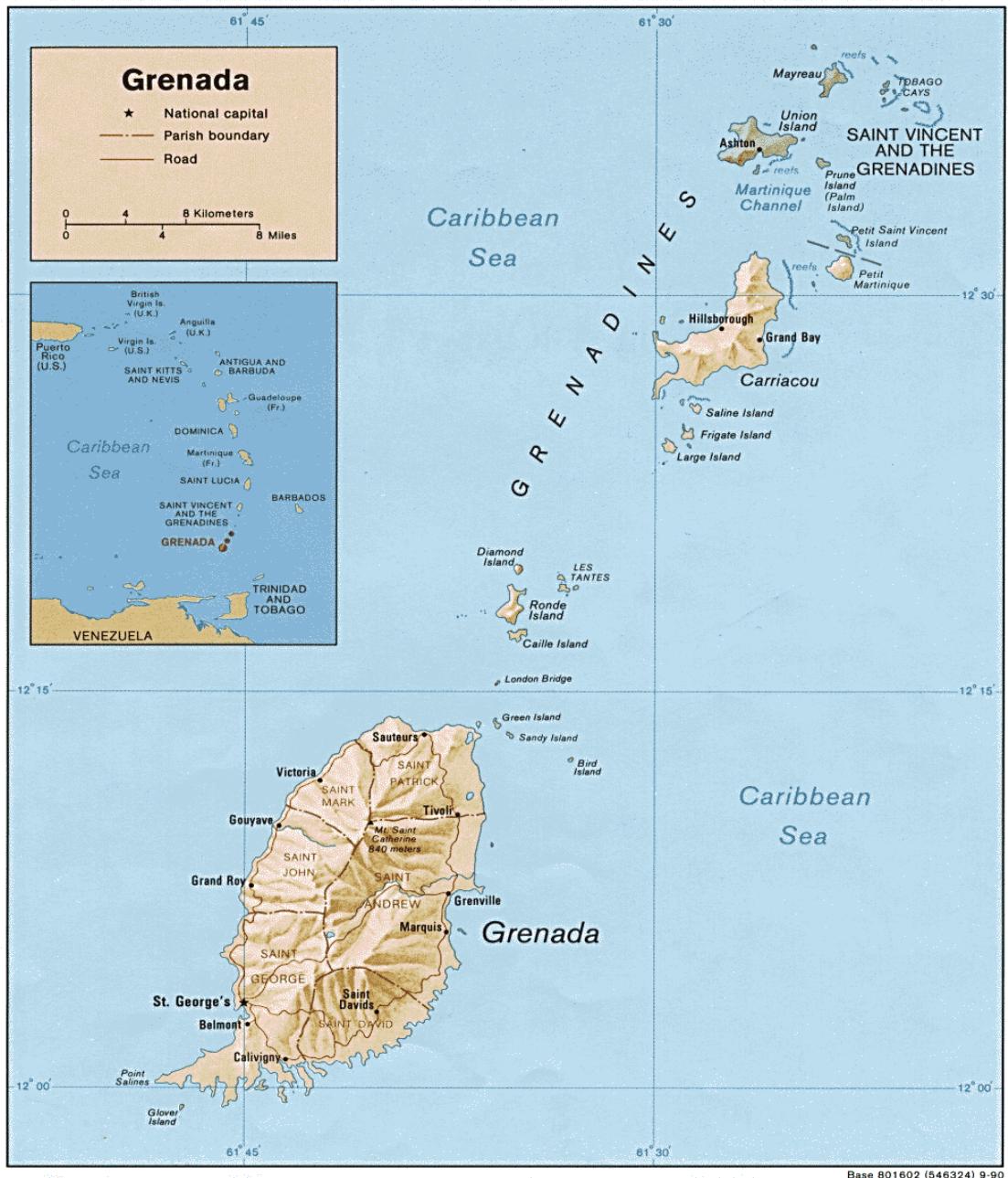


Figure 1. Map of Grenada

3.2 Climate and Geography

The geology of Grenada is of volcanic origin consisting mainly of volcanic products and, to a lesser degree, of sedimentary rocks formed during the Miocene to the Quaternary period of their volcanic history. A common feature on the slopes in many parts is huge boulders formed from volcanic blasts. Crater lakes, sulphur and hydrothermal springs located in the center and north of the island provide evidence of the volcanic history of the island. Grenada is vulnerable to earthquakes and soil

movement. There is an active undersea volcano known as Kick 'em Jenny to the north of the island in an area between Grenada and Carriacou.

There are three different soil types sand, silt, and clay all suitable to agricultural either livestock or crop production. The soil types are well suited to accommodate the required project facilities and infrastructure depending on location and design.

The interior of Grenada is dominated by mountain peaks, steep ridges, and deep narrow valleys. Fast flowing streams with high gradients occur in the valley bottoms. The Mt. St. Catherine is the highest peak on the island with an elevation of 2760 ft. above sea level. The natural drainage pattern of the island follows the natural land form into gullies, ravines and rivers which flow directly into the sea. Concerns related to the potential negative impact of soil erosion may be result by the implementation of some activities in this project.

Grenada experiences a tropical climate with temperatures ranging between 25° Celsius and 27° Celsius. There are two seasons, the dry season, officially from June to December and the rainy season, for the rest of the year. The average annual rainfall varies between 460mm-1700mm in coastal areas and 4000mm - 7000mm in the mountainous regions. The island is located within the hurricane belt, with average humidity above 85% and has been impacted by several major hurricanes and other weather related events.

3.3 Socio-economic and Human Settlement

Socio economic data

Grenada's economic performance has improved considerably in recent years. Real GDP growth rebounded strongly in 2014-15, to over 6 percent, led by a stronger tourism, investment and agricultural sector growth. Growth has however declined to 3.7 and 4.5 percent (preliminary estimates) in 2016 and 2017 respectively, as output gaps were closed and agricultural output fell due to drought. Economic activity remains supported by robust manufacturing, construction and service sector growth. Although the number of visitors to Grenada in 2017 remained at the 2016 levels, overall spending by visitors increased by 4 percent. Construction activity showed a sharp increase led by tourism-related and private-sector commercial investments, in addition to major public-sector investments. The economic activity has led to improvements in the labor market. The unemployment rate fell to 23.4 percent in 2017 from 28 percent in 2016. Youth unemployment however remains high at 42%. This was however a marked decline from the 50.4 percent recorded in 2016. Furthermore, structural labour market problems persist, including a private sector perceived skills mismatch, high wage reservation prices due to remittances, and strong unionization.

The Ministry of Health is responsible for health service delivery and policy formulation and regulations. Health care is provided through thirty six (36) primary care facilities within 3 mile radius of communities throughout the country. There are also three (3) acute care hospitals and a Psychiatric Hospital and services (preventative, curative and rehabilitative), are also offered through the private health sector.

Non communicable diseases are responsible for most deaths with the leading causes of morbidity and mortality being malignant neoplasms, endocrine and metabolic diseases and cerebrovascular diseases. The PAHO/WHO STEPS 2011 revealed that 61.3% of respondents had 1 or 2 risk factors and, 35% had 3 to 5 risk factors for NCDs. Many persons (58.7%) were overweight while 25.2% were obese. Health programmes are being strengthened to address these challenges.

Vector borne diseases such as dengue and chikungunya have been responsible for epidemics in the country from 2010 to 2016. Other communicable diseases of significance are respiratory infection, diarrheal disease and HIV infection. Vaccination coverage for administered antigens is 95%–100% and the country has maintained elimination of poliomyelitis, measles and rubella.

Health services delivery is financed through general taxation and health Leadership and Governance are guided by health policies and legislation. A National Health Sector Plan (2016-2025) addresses issues related to the social determinants of health, sustainable development goals among other issues.

Ethnic and cultural groups

About 82% of Grenada's people are descended from African slaves brought to the islands by the French and English. There is also a small number of descendants of indentured workers from India who were brought to the island between 1857 and 1885. Grenadians of Indian descent account for the second largest ethnic group in the country. There is also a community of English and French descendants, with the remaining 13% of the population comprised of people of mixed descent, and recent migrants (post independence 1974) from Syria, Lebanon and India.

Human settlement patterns and colonial history

Grenada is relatively mountainous with most of the settlements located within 1 km of the coast. There are two major urban centres, St. George's the Capital (in the Parish of St. George), in the south west of the island, and in the east, the town of Grenville (in the Parish of St. Andrew). The parishes of St. George and St. Andrew account for about 60% of the population. The last population census, in 2011 recorded 106,667 persons resident in the country. However, the population estimate for 2001 was 103,136. The population density in 2011 as estimated at 306.80 persons per km² (CSO, 2019)1997. The densest areas of human settlement occur in St. George's, as well as most of the industrial and tourism development, which occurs in the southern parts of the parish. Thus this area is said to be the most significant contributor to the many environmental problems arising from such development.

The original inhabitants of the island were the Kalinago- Arawaks and Caribs- who migrated up the South American Archipelago. Though the island was sighted by Christopher Columbus on his third voyage in 1498, the first attempt to settle the island by European colonizers was in 1638, with the first successful landing by the French in 1650, in an area to the south of the island referred to a Ballast Ground. From that period up until 1763, the possession of the island switched between French and English until it was surrendered to the British by the Treaty of Versailles of Paris in 1763.

By this time the Kalinago population had been decimated by disease, war, and topflight, having resisted the attempts of colonization and enslavement by the European settlers. Today evidence of the Kalinago history is recorded as petroglyphs, including the Mt. Rich, Carib Stone. Fragments of pottery and other small stone artifacts also serve as evidence of the history of the Kalinago. Leapers Hill in Grenada provides the most poignant historical record of the Kalinago in Grenada, as it is suggested that rather than surrender as slaves to the French, the Kalinago jumped to their deaths from a cliff overlooking the sea.

The History of colonization meant that Grenada was inhabited by various individuals of European descent, and that African slaves and indentured servants from India were brought to the colony to work on the plantations. Today, the population of the island is primarily of African, and mixed race decent. Recent immigrants include persons of Syrian, Lebanese and East Indian descent.

3.4 Biological Resources

Forest and Terrestrial Wildlands

The forest communities in Grenada have been classified into six (6) forest types; (1) Cloud Forest (montane thicket, palm break and elfin woodlands) which are located in the high elevations of the Grand Etang and on Mt. St. Catherine; (2) Rain Forest and Lower Montane Rain Forests occur below the cloud forests where rainfall exceeds 2500 mm per annum; (3). The evergreen and semi-evergreen forests occur where the rainfall is between 2000 - 2500mm per annum; (4) Deciduous Forest and Cactus Scrub - These occur at lower elevations where the rainfall is between 1000 - 2000 mm per annum. They are found in the south and north of mainland Grenada and on Carriacou and Petit Martinique; (5) Littoral Woodlands typically occur along the coast in small stretches, however, most of this woodland has been lost; (6) Mangrove Woodlands occur along the coastline but are endangered due to development and reclamation. There are three endemic species of plants are known, the Grand Etang Fern (*Danaea* sp.), the Cabbage Palm (*Oxodoxa olaracea*) and one endemic tree species (*Maytenus grenadensis*).

Grenada's terrestrial wildlife includes various amphibians, lizards, mammals, and bird species which support a diverse ecosystem. Species of note include the two birds endemic to Grenada, the Grenada Dove (*Leptotila wellsi*) and the Grenada Hook-billed Kite (*Chondrohierax uncinatus murus*), both of which are endangered species. Grenada is also home to four bird species which are endemic to the Lesser Antille - the Grenada flycatcher (*Myiarchus nugator*), the Scaly-breasted thrasher (*Margarops fuscus*), the Lesser Antillian bullfinch (*Loxigilla noctis*), and the Lesser Antillian tanager (*Tangara cucullata*).

Inland Fresh Water

Inland fresh water resources in Grenada include a network of rivers (40) and streams, lake and springs. A small percentage of water is also available through rainwater harvesting. All of the major watershed in Grenada have perennial flows which are greatly reduced in the dry season which typically extends from January through May. Two crater lakes the Grand Etang (approx. 8 hectares) is located within a the protected Grand Etang Forest Reserve, and Lake Antoine located in Levere, St. Patrick. The Levear Pond, an ancient volcanic crater, is filled with a mixture of fresh and salt water and supports a rich ecosystem of bird and aquatic wildlife. It is surrounded by red and white mangroves. Coconut palms, cactus and woody shrubs grow in the upland regions next to the pond. While this lake holds no major importance for water supply, except for the occasional watering of livestock, it is critical to coastal zone sustainability.

There are a variety of wildlife ranging from fish, snails, insect and worms which inhabit inland fresh water sources. Though not all are known or documented they include including freshwater shrimp, Tilapia, mullet and other freshwater fish; Red-legged tortoise, Fulvous tree-duck, and the Everglade kite.

Rivers have always been a source of importance to households as it provides a source of water for households needs and income. They are subject to environmental degradation from the disposal of waste and run off from farms.

Coastal and Marine Habitats

There are three coastal habitats that are important to Grenada, the mangrove swamp, sea grass beds, and coral reefs. Mangrove ecosystems provide substrate for marine organisms, feeding and breeding areas for many commercial species and acts as nurseries for their offspring. Seagrass beds act as a transition point and energy bridge between mangrove communities and the reef system and fishing grounds. Marine turtles e.g. (Atlantic Green Turtles) depend on healthy sea grass communities as a source of food. Coral reefs provide excellent shelter for some resident and transient species (to offshore fishing grounds) as well as substrate for algae and other organisms which form part of a rather complex food web.

The main species of mangrove include red mangrove (*Rhizophora mangle*), black mangrove (*Avicennia germinans*), white mangrove (*Laguncularia racemosa*) and button-wood (*Conocarpus erectus*). The rest of the coastal area is considered dry woodland and cactus shrub made up of a mixture of species including *Ipomea* sp. in some sandy beach areas, sea grape (*Coccoloba uvifera*), coconuts (*Cocos nucifera*), almond (*Terminalia cattapa*) and manchineel (*Hippomane mancinella*). The reefs of Grenada are in varying stages of degradation and recuperation. Coral species include elkhorn coral (*Acropora palmata*) finger coral (*Porites porites*) and some boulder coral including mustard, and brain coral. Damage to reefs have been attributed to various causes including environmental threats, hurricane and storm surge, terrestrial run off and sedimentation, human activity including indiscriminate boat anchoring and overfishing. Coastal development and poor land use practices have also contributed to the degradation of both coral reefs and mangroves.

The marine ecosystem supports resources (fish, shellfish, reefs and dive sites) that are vital to the local economy. Selected species of seafood including conch, sea urchin and spiny lobster are managed through the fisheries regulations which mandate size restrictions to prevent overharvesting of the species. The law allows for the establishment of a closed season from which bans the harvesting of these or any other species assessed to be protected. The Government of Grenada has also designated four (4) Marine Protected Areas (MPA), which are geographical areas within the marine economic zone that recognized and managed through legislation to promote the long term conservation of nature and the ecosystems. MPA are also recognized as important breeding grounds for migratory fish species and are protected to allow for replenishment of species within the marine ecosystem.

The designated sites in Grenada are the Molinere Bay MPA, Woburn Bay MPA and the Grand Anse MPA, in the parish of St. George and the Sandy Island Oyster Bed MPA, Carriacou. None of the planned construction is expected to directly impact these sites, however the improper disposal of medical and or construction waste, and sedimentation can impact the marine ecosystem from runoff through the natural watercourse.

3.5 Geo-hazards

The country is vulnerable to a number of natural hazards such as hurricanes, earthquakes, volcanic activity, drought, tsunamis, flooding, and landslides. The effects of these phenomena can be exacerbated by the activities of population such as deforestation, indiscriminate garbage disposal, poor building practices, and unplanned settlements in environmentally sensitive areas.

With the increased frequency of more intense weather events as a result of climate change, the possibility for disasters to occur increases placing increased strain on the limited national technical and financial resources and the country's ability to respond.

The island lies just south of the Atlantic hurricane belt. Major hurricanes which have resulted in significant damage to the island include Hurricane Janet in 1955, and hurricane Ivan and Emily in 2004 and 2005 respectively. Hurricane Ivan in September of that year cost Grenada 28 lives and 2.2 Billion \$EC. It was followed by Emily in July 2005 and that caused 1 life and 140 million \$EC in infrastructure damage.

Coastal zones are also vulnerable to storm surge during hurricanes, causing erosion from wave energy, various major towns (including St. George, Grenville and Grand Anse) and economic zones are subject to flooding during heavy torrential rains. Tsunamis pose a hazard in the Eastern Caribbean and can be caused by various hazards including earthquakes or eruptions of volcanoes lying on the seafloor such as Kick-em Jenny east of Grenada. It is estimated that an eruption could result in a 2-meter tsunami arriving in Grenada within minutes of eruption (Gibbs 2001). The offshore undersea volcano of Grenada (Kick-em Jenny), is active and poses a continuous hazard of eruption. The composite volcanic hazard map of Grenada shows that the most vulnerable regions are to the north east and could be affected by a tsunami caused by undersea movements of rock or explosive extrusives including projectiles from the volcano.

Earthquake events are considered a very low risk on Grenada though the off-shore volcano is regularly active. Excessive rainfall as well as tectonic events may cause landslides in Grenada.

3.6 Physical Cultural Resources

The rich culture and history of Grenada has created physical cultural resources, which are features or objects of interest and value to the nation's people because of their archaeological, paleontological, historical, architectural, religious, aesthetic, or other cultural significance. These may include Amerindian sites, relicts of forts or plantations, shipwrecks, or historic buildings which may have great local or international value, thus meriting attention and preservation.

Important sites and attraction sites in Grenada include the Historic District of the Town of St. George, Fort Frederick and Fort George, the National Museum and the Grand Forest Reserve. Important cultural traditions in Grenada include Carnival, the Carriacou Maroon and Carriacou Parang Festivals and which highlight the music and foods of the island. Important sporting events include the Bill Fishing Tournament and various regattas held throughout the year.

4.0 POTENTIAL NEGATIVE IMPACTS

The Project is expected to bring numerous positive benefits, but there is also a risk of negative impacts in the social and environmental areas if certain activities are not appropriately managed.

As described earlier in this ESMF, Component 1 of the Project would include civil works at various health facilities and the procurement of new and subsequent disposal of medical equipment and construction waste that may impact the environment. Further the operation of medical facilities generates medical waste which may also impact the environment. and as such may require mitigation.

Under Component 1 Improved Health Facilities and Laboratory Capacity, the project will support the strengthening of Health Facilities Infrastructure and Referral Networks as well as support investments in the laboratory network to enhance efficiency and effectiveness of service delivery. It will focus on building resilience in health facilities baseline by the PAHO /WHO Model for Smart Health Facilities, in this regard five (5) healthcare facilities will be retrofitted according to the Smart healthcare Facility Standard. This component will also invest in improving the infrastructure and operation of public health laboratory network through technology upgrade for laboratory equipment, professional development of laboratory staff, improvement of the surveillance network and development of the quality assurance standards.

Under Component 2: Strengthening Public Health Surveillance and Emergency Management, will support investment to strengthen public health systems for preparedness and response, including improvements to surveillance systems, and capacity of the system to respond to national, regional and public health emergencies of international concern. Activities under this component will include support for Basic Field Epidemiology training, and strengthening surveillance systems and infrastructure for International Health Regulations compliance. It will also strengthen the national emergency response management systems and health emergency operations coordination and response systems.

Negative environmental and social impacts could result from several of the project activities, as summarized below:

- Refurbishments at selected health facilities presents occupational health and safety risks typical associated with small civil works such as those arising from not using safety equipment, or workers not properly managing heavy equipment.
- Upgrading of facilities should also include adequate treatment of wastewater. Diesel generators may also be used for emergency power back-up, requiring adequate ventilation, fuel storage, and safety measures. During operations, these systems must be maintained adequately to minimize potential releases to the environment.
- Refurbishments can also impact the neighbouring areas through increased traffic, dust and noise, stormwater runoff from disturbed areas or concrete mixing areas, inadequate debris disposal, and poor sanitary facilities on the work site.

- Unexpected risks from small civil works include destruction of historical artefacts during earth-moving activities, damage to historical buildings or facades, or other impacts to physical cultural resources.
- Refurbishments at selected health facilities could create sources of medical waste, equipment or supplies needing proper management and disposal.
- Construction waste will need to be disposed of properly as will any hazardous material such as asbestos, mercury, chemicals which may also be discovered during demolition, repairs, or refurbishment.
- During operation of the health care facilities, there may be increased use and scope of services, resulting in additional sources of medical waste needing proper treatment and disposal.
- The health and safety of health care workers could be affected by waste management practices as well as by hygiene conditions, isolation and storage procedures for bio-infectious, radiologic or genotoxic waste.
- If new lands must be acquired, informal settlers removed from government (Crown) lands, then social impacts could include loss of crops or livelihood, or involuntary physical displacement of persons.

The potential negative impacts can be grouped into two categories: those associated with typical small civil works, and those associated with medical waste. Each is discussed in more detail in the following two sections.

4.1 Negative Impacts associated with Small Civil Works

There is the possibility of the occurrence of typical works-related negative impacts associated with the small civil works (refurbishment of selected health facilities) for the Project. Each of the impacts is described in more detail below.

- **Increased traffic** can generate conflict. There is always the possibility of increased traffic for civil works of certain sizes especially when the works are occurring adjacent to a main highway or any busy road. The potential for vehicular/vehicular and pedestrian/vehicular conflict increases as the scale of works increases if proper traffic management procedures are not implemented. This can lead to negative response from the nearby residents or the community affected. The matter of safety also becomes a great concern in relation to the speed of the vehicles as well as the alertness of the drivers as they traverse the highways and through communities especially if there are children within the vicinity who may be accustomed to playing on the roads or sidewalk areas. The breakdown of a large project vehicle causing the blockage of a well travelled route can escalate tensions within a community especially if it contributes to loss of travel time to work, school, or returning home. This may be the case at many of the health facilities selected for refurbishment.

- **Increased noise** levels from activities adjacent to or within communities and residential areas can be deemed as an unnecessary and unwanted nuisance affecting local business and day to day activities. Care must be taken in the judicious usage of any form of heavy noise and vibration equipment. Associated vibrations from the use of heavy equipment such as rollers can negatively impact surrounding communities, causing nuisances by shaking household items and possibly affecting the stability of nearby structures.
- **Poor Solid and Liquid Waste Management** can be detrimental to both the terrestrial and to the nearby marine environment. The mishandling of chemicals, detergents, greases, oils, building materials, can lead to the poisoning of the terrestrial and marine environment. The management of human wastes on site is very critical to ensuring a healthy working environment and reduce the risk of faecal contamination. Managing excavated soil is also important especially when there is potential for stormwater runoff into drains, rivers, and coastlines. In addition, care is needed when soil is being transported to another site for use or storage. Care must be taken to ensure the appropriateness of the transport and the protocols for transporting and storing the soil, using BMPs for erosion control and safe transport.
- **Hazardous Materials.** At times hazardous materials may be discovered, especially when older buildings are being refurbished. Such materials may include asbestos in ceiling tiles or roof panels, medical waste in storage areas or debris piles, paints or solvents in maintenance areas, or fuels such as diesel tanks or contaminated soils. Improper handling or disposal of these materials can lead to impacts to health of workers or the community, or pollution of watercourses and nearby lands.
- **Air pollution** can come from a number of sources. Vehicles and machinery can produce noxious fumes such as carbon monoxide, diesel fumes, as well as burnt oil fumes which can be a nuisance to nearby facilities or communities. The mishandling of particularly noxious chemicals such as solvents or chemical washes, greases, as well as the burning of solid wastes on the work site, especially chemical containers, can lead to air pollution resulting in negative health impacts.
- **Terrestrial and Marine Pollution.** The potential for terrestrial and marine pollution can occur with indiscriminate disposal of both solid and liquid wastes. The mishandling of chemicals and especially waste oils can poison the landscape. Improper disposal of human wastes can lead to similar effects. This also applies to pesticides used in termite treatment of new or existing buildings. With the occurrence of civil works projects along or adjacent, or within the coastal waters, there is the possibility of impact on the marine ecosystem which must be evaluated as project details become clear.
- **Soil Erosion and Land Slippage** can occur if land clearing and excavation practices, as well as poor site drainage can lead to exposed soil. Opening of roadways, trenching for installation of water lines, grading or clearing, may all destabilize the soil surface and eventually be the cause for landslides at a later time. Accordingly, if any of these activities become related to the project, careful planning is required to ensure that soil erosion is minimized and that landslide potential is not exacerbated. Best Management Practices (BMPs) for slope stabilization should be used.
- **Occupational Health and Safety Issues.** Worker safety is critical to any operation, the mishandling of equipment, the improper storage and usage of various chemicals and materials on site, high levels of continuous noise and fumes, as well as inadequate or improperly used

safety equipment can cause serious injury and down time to the workers and project and should therefore be avoided. If outside labour is required, proper facilities for housing will be provided for workers.

- **Loss of or Damage to Physical Cultural Resource** may occur during any type of earth works associated with refurbishment or expansion activities, there is the possibility of coming across or “chance finding” what may appear to be an historical or cultural artifact which may need to be studied and preserved by the relevant authorities. In cases like this, the resource could be lost due to careless activities prior to the relevant authorities determining whether or not it is worthy of preservation. It is therefore recommended to consult with local stakeholders as to the final design of facility, and the disposition of any potential physical and cultural resources, because the valuation of such items is ultimately subjective and they are of most value to local stakeholders.
- **Loss of Land, Access, or Livelihood.** In some cases it is necessary to acquire land, remove crops when clearing government lands, or relocate businesses so a project activity can proceed. Although this scenario is not anticipated if it is deemed necessary through any project changes this will done according to prevailing law and World Bank Policy OP 4.12.

4.2 Negative Impacts associated with Medical Waste

According to the WHO², waste and by-products from the health sector cover a diverse range of materials, as the following list illustrates:

- Infectious waste: waste contaminated with blood and other bodily fluids (e.g. from discarded diagnostic samples), cultures and stocks of infectious agents from laboratory work (e.g. waste from autopsies and infected animals from laboratories), or waste from patients with infections (e.g. swabs, bandages and disposable medical devices);
- Pathological waste: human tissues, organs or fluids, body parts and contaminated animal carcasses;
- Sharps waste: syringes, needles, disposable scalpels and blades, etc.;
- Chemical waste: for example solvents and reagents used for laboratory preparations, disinfectants, sterilants and heavy metals contained in medical devices (e.g. mercury in broken thermometers) and batteries;
- Pharmaceutical waste: expired, unused and contaminated drugs and vaccines;
- Cytotoxic waste: waste containing substances with genotoxic properties (i.e. highly hazardous substances that are, mutagenic, teratogenic or carcinogenic), such as cytotoxic drugs used in cancer treatment and their metabolites;
- Radioactive waste: such as products contaminated by radionuclides including radioactive diagnostic material or radio therapeutic materials; and
- Non-hazardous or general waste: waste that does not pose any particular biological, chemical, radioactive or physical hazard.

² <http://www.who.int/mediacentre/factsheets/fs253/en/>

Health-care waste contains potentially harmful microorganisms that can infect hospital patients, health workers and the general public. Other potential hazards may include drug-resistant microorganisms which spread from health facilities into the environment. Adverse health outcomes associated with health care waste and by-products also include:

- sharps-inflicted injuries;
- toxic exposure to pharmaceutical products, in particular, antibiotics and cytotoxic drugs released into the surrounding environment, and to substances such as mercury or dioxins, during the handling or incineration of health care wastes;
- chemical burns arising in the context of disinfection, sterilization or waste treatment activities;
- air pollution arising as a result of the release of particulate matter during medical waste incineration;
- thermal injuries occurring in conjunction with open burning and the operation of medical waste incinerators; and
- radiation burns.

The Project may increase the use and scope of services at facilities, which in turn may result in additional sources of medical waste needing proper treatment and disposal. This is also the case for work during emergency response or epidemics. The health and safety of health care workers could be affected by waste management practices as well as by hygiene conditions, isolation and storage procedures for bio infectious, radiologic or genotoxic waste. Such risks, if not mitigated, may also affect nearby communities.

5.0 MITIGATION MEASURES

Mitigation measures address the potential impacts of project activities to avoid or reduce any negative impact on the environment or on people. As indicated in the section on impacts, there is the potential for negative impacts associated with small civil works and rehabilitation, and there are potential impacts associated with the generation and management of medical waste.

The careful implementation of mitigation measures will allow for the reduction or avoidance of any adverse impacts. These efforts start in the pre-design phase with the screening of possible sub-projects for consideration, and include efforts during the design, implementation, and operation phases.

Design phase

Parameters	Project Impact	Monitoring or Mitigation actions	Ministry/Unit responsible for monitoring effectiveness of mitigation measures	Means of Verification	When/Frequency or Duration	Agency /Person responsible for Implementation	Agency responsible for Supervision	Costs borne by
Building materials	Potential carcinogenic and hazardous risks to communities	Ensure Adherence to National Building code and Procurement guidelines	Physical Planning Unit (PPU). Project Management Unit	Letter of approval from the Physical Planning Unit	During pre-construction and design period	Contractor/Quantity surveyor	Project Management unit	Contractor
Building Appearance and Façade	Public anxiety regarding building design not in conformity to Heritage conservation site	Adherence to building guidelines for designated Heritage sites	Project Management Unit	Letter of approval from the Physical Planning Unit	During Design period	Architectural design team/Project Management Unit	Project Management Unit	Included in Project
Seismic and Hurricane resistant Requirements	Damage to community structures from seismic shocks and impacts	Ensure adherence to the National and Regional Building Code and guidelines	Physical Planning unit (PPU)	Letter of approval from the Physical Planning Unit	During design and pre-construction period	Architect and Project management Unit	Project Management Unit	Included in Project
Chemical and Vapour	Public complaints of	Ensure efficient design of natural	Project Management	Letter of approval	During design and	Architect/ and Ministry of	Project Management	Contractor

Parameters	Project Impact	Monitoring or Mitigation actions	Ministry/Unit responsible for monitoring effectiveness of mitigation measures	Means of Verification	When/Frequency or Duration	Agency /Person responsible for Implementation	Agency responsible for Supervision	Costs borne by
Emissions/ Ventilation	Noxious fumes emission	ventilation system where possible and controlled air flows where necessary	Unit/ Ministry of Health	from the Physical Planning Unit/	construction period	Health	unit	Contractor
Traffic Flow	Public Complaints regarding traffic congestion	Assessment using site selection tool Development of a Traffic mitigation Plan	Project Management Unit	Traffic Management Plan from the Traffic Dept of the Royal Grenada Police Force	During design and pre-construction period.	Project Management Unit/ Ministry of Health Hospital Administration	Project management Unit	Contractor
Public Grievances and Complaints	Public resentment to Project due to unaddressed issues	Ensure that a grievance redress mechanism (GRM) is in Contract specifications	Project Management Unit	GRM clause in Contract Document GRM at Project level managed by PIU	During construction period	Building Contractor/Project Management Unit	Project Management Unit/ Office of the Ombudsman	Included in Project
Health Service interruption and relocation during renovation	Patients avoid care	Communication in community prior to and during renovation on any changes to services. Funded/reimbursed referrals to nearby	Ministry of Health and the PIU Social Safeguards Specialist.	Site visits	During the design phase and continues through construction period until services reopen.	Ministry of Health	PIU	Ministry of Health

Parameters	Project Impact	Monitoring or Mitigation actions	Ministry/Unit responsible for monitoring effectiveness of mitigation measures	Means of Verification	When/Frequency or Duration	Agency /Person responsible for Implementation	Agency responsible for Supervision	Costs borne by
	Patients spend more time and money seeking care	service provider						

Construction phase

Parameters	Project Impact	Monitoring or Mitigation actions	Ministry/Unit responsible for monitoring effectiveness of mitigation measures	Means of Verification	When/ Frequency/ Duration	Agency responsible for Implementation	Agency responsible for Supervision	Cost borne by
Excavation and removal of soil during renovation or expansion of facilities	Unearthing of archeological material.	Inclusion of chance find procedures in worker contracts and train workers in response procedure.	Contractor/Project Management Unit	Archaeological findings Guideline Procedure document	During Pre-construction and Construction period	Building Contractor	Project Management Unit/ Ministry of Tourism-Heritage Conservation Officer	Contractor

Parameters	Project Impact	Monitoring or Mitigation actions	Ministry/Unit responsible for monitoring effectiveness of mitigation measures	Means of Verification	When/ Frequency/ Duration	Agency responsible for Implementation	Agency responsible for Supervision	Cost borne by
	nuisance complaints	curtains, sprinkling of motor ways	Management unit/ Ministry of Health	Agreement	Construction period, done as required	Contractor	Project Management Unit	Contractor
Noise from construction	Noise nuisance complaints	Limit construction hours to 7am-5pm week days, and promote this publicly	Contracted agency for works construction.	Ensure Noise control clause and control mechanism is in Contract specifications	During construction period	Building Contractor	Project Management Unit Royal Grenada Police Force/ Ministry of Health	Contractor
Occupational Health and safety of Workers and others on construction site	Concerns over workers Health and safety on the job	Ensure Occupational Health and Safety measures are included in Contract specifications	Contracted agency for works construction.	Occupational Health and Safety measures in contract document	During pre-construction and construction period	Building Contractor/Project management unit	Project Management Unit/ Ministry of Health/Ministry of Labour	Contractor
Generation of Solid and Liquid wastes.	Environmental impacts from improper waste disposal	Implementation of a Waste Management Plan Adherence to established	Ministry of Health - Hospital Services Ministry of Health -	Project Waste Management Plan inclusive of Biomedical wastes Hospital OSH Policy and	During Construction period During Construction	Building Contractor Building Contractor/Project	Project Management Unit Project Management	Contractor

Parameters	Project Impact	Monitoring or Mitigation actions	Ministry/Unit responsible for monitoring effectiveness of mitigation measures	Means of Verification	When/ Frequency/ Duration	Agency responsible for Implementation	Agency responsible for Supervision	Cost borne by
	Injury to persons	Occupational Safety and Health Policies and practices	Hospital Services	Practices document	phase of the project	management Unit	Unit	
Traffic Flow	Public Complaints regarding traffic congestion	Development of a Traffic mitigation Plan	Project Management Unit	Letter of Approval from the Traffic Dept of the Royal Grenada Police Force	During design and pre-construction period.	Project Management Unit/ Ministry of Health Hospital Administration	Project management Unit	Contractor
		Establishment of No Parking and designated parking Zones	Project Management Unit in collaboration with the RGPF Traffic Dept					
Public Grievances and Complaints	Public resentment to Project due to unaddressed issues	Ensure that a grievance redress mechanism (GRM) is in Contract specifications	Project Management Unit	GRM clause in Contract Document	During construction period	Building Contractor/Project Management Unit	Project Management Unit/ Office of the Ombudsman	PIU

Implementation phase

Parameters	Project Impact	Monitoring or Mitigation actions	Ministry/Unit responsible for monitoring effectiveness of mitigation measures	Means of Verification	When/Frequency or Duration	Agency responsible for Implementation	Agency responsible for Supervision	Costs borne by
Generation of Solid, Liquid, and Biomedical wastes.	Environmental impacts from improper waste disposal	Implementation of a Waste Management Plan inclusive of Biomedical wastes	Ministry of Health - Hospital Services Grenada Solid Waste Management Authority	Project Waste Management Plan inclusive of Biomedical wastes	During Operational period	Ministry of Health Lab Services	Ministry of Health and Ministry of Labour	Included in Project
	Injury to persons	Adherence to established Occupational Safety and Health Policies and practices	Ministry of Health - Hospital Services	Hospital OSH Policy and Practices document	During Construction and Operational phase of the project	Ministry of Health	Project Management Unit	

5.1 Pre-Design Phase

It is understood that all the health care facilities to be refurbished will be located on lands already owned by the Government, and in areas that are unoccupied. However, it is possible that conditions have changed, that new parcels or locations might be better suited for improvements, or that needs may evolve over the course of the project. In addition, the specific details of the health care facilities where improvements and refurbishments will be done are not yet known and will not be known until a survey is performed during the early stages of project implementation. Therefore, it will be necessary to conduct a screening process and verify that the expected works are in line with those envisioned in the ESMF, and that there are no new, unexpected, or unacceptable environmental and social risks which have not been taken into account in the ESMF.

During the pre-design phase, the PIU officer uses his/her training and experience to make a determination based on the degree of impact likely to be caused by the project due to its size, proximity to a coastal area, marine or terrestrial reserve and the existing topography that may be disturbed. Other environmental and social risks or potential impacts should be kept in mind during the pre-design screening process, such as infringement on lands (whether legally occupied or not), presence of vulnerable persons, existence of hazardous materials or conditions, etc. In the pre-design phase the questions in the following Table should be reviewed, addressed, and recorded.

The objectives of the screening are to (1) identify sub-projects that are not consistent with the proposed OECS project, in line with the current ESMF (exclusion criteria); (2) to determine the WB environmental category for each sub-project and the WB instruments needed (ESIA/ESMP) (categorization criteria); and (3) identify the mitigation measures that will be required to implement the sub-project. To this end, the screening is performed in 3 stages and for each stage a specific section of the Table is applied: Section A: Exclusion criteria; Section B: WB Categorization; Section C: specific mitigation required.

Table 1. Pre-Design (Screening) Questions for Health Facility Refurbishments

Sub-project title		
Sub-project location/address		
Sub-project brief description		
1. Exclusion criteria ((if response is Yes to any of the questions below, reconstruction in the proposed site is not eligible and a new site must be selected)	Yes/No	Observations
1. Is facility located in known flood or flashflood risk area/spot?		
2. Is facility located in an area susceptible to landslides?		
3. Is facility located on top of or adjacent to known fault-line?		
4. Is facility located in a protected area or will the refurbishment / expansion of the facility be located in protected area?		
5. Is facility located under a transmission line?		
6. Is facility located in an area where known Physical Cultural Resource (PCR) exist?		
7. Will the refurbishment / expansion of the facility result in significant conversation or degradation of critical natural habitat?		
8. Is refurbishment / expansion of the facility proposed to be in an area where residential, agricultural or other economic activities are currently taking place (legally or not)? If Yes, the activities in this site should not proceed, as it would require the implementation of OP 4.12 .		
2. Project Classification (Projects classified as category A are not eligible for this operation)		If Yes: Classification is
1. Is the proposed refurbishment/expansion project likely to have only minimal or No adverse environmental impacts?		Category C
2. Is the proposed refurbishment/expansion project likely to have mainly adverse environmental impacts that are small-scale, site-specific, temporary, reversible, and limited to the civil works site or replacement time frame and for which mitigation measures are readily known and easily implemented?		Category B
3. Will a specific Environmental and Social Management Plan (ESMP) be available for the nature and scale of the proposed works, including all measures needed to prevent, minimize, mitigate, or compensate for adverse impacts and improve environmental performance?		Category B
4. Will the proposed refurbishment/expansion works likely have primarily significant adverse environmental impacts that are sensitive, diverse, or unprecedented ³ ?		Category A
5. Will the proposed refurbishment/expansion works likely negative impacts affect an area of influence that significantly exceeds the facilities footprint?		Category A
6. Will the proposed refurbishment/expansion works involve physical resettlement or economic displacement of a significant number of people?		Category A

³ Unprecedented impacts are those which have not been experienced before in the project's area of influence.

3. Characteristic of Sub-project or Activity:	Yes/No	Observations⁴
General accessibility and logistics		
1. Does the facility have good access, a functional entry, and a road that does not need major repairs or extensions?		
2. Is the work site flat, clear, and levelled, and not require cutting of slopes or major earth movement, except small amounts?		
3. Is the work site outside a flood zone, wetland, river or coastal flood plain?		
4. Is the work site an area with high water table, or a poor drainage zone?		
5. Will the refurbishment/expansion generate significant quantities of demolition waste?		
6. Is the facility connected to (or has the possibility to be connected to) public potable water services?		
7. Is the facility connected to (or has the possibility to be connected to) public sewage services?		
8. Is the facility serviced by regular waste collection by Authorized Collectors?		
9. Is the facility serviced by regular Health Care/Medical waste collection by Authorized Collectors?		
Biodiversity		
10. Will the sub-project involve works in rivers, canals, or drains?		
11. Will the sub-project involve land disturbance or site clearance?		
12. Could the project activities affect any natural or protected areas, Parks, natural areas, or Forest Reserves within 1 km of the Project?		
Physical Cultural Property		
13. Could the works adversely affect cultural property, including archeological sites or historic buildings, artwork, visual aesthetics, or other physical cultural resources?		
14. Is the sub-project located near a recognized PCR conservation area or heritage site?		
15. Does the sub-project involve significant excavations and/or movement of earth?		
Pest management		
16. Does the activity or project involve the use of pesticides, herbicides, or other agents to destroy pests or control vectors, except in small quantities?		
17. Will the project use of chemicals, agrochemicals, corrosives, and solvents?		

⁴⁴ Refer to the mitigation measures and BMP available and that will be implemented.

Air quality/noise		
18. Will the project use machinery?		
19. Will the refurbishment works involve marble, concrete, ceramics, wood, etc.?		
20. Will the project activities generate volatile Organic Compounds VOCs (paints, asphalt heating, preparation and application, etc.)?		
21. Will the project involve major and/or minor demolition works?		
22. Will the project involve Asbestos management?		
23. Will the project involve the installation of air conditioning units/systems?		
24. Will the project have the potential to generate odors?		
Soil contamination, erosion, sedimentation		
25. Will the project involve hazardous materials management and disposal (e.g. asbestos, medical or infectious waste, solvents or gasoline) excepting small amounts?		
26. Will the project involve large quantities of technological wastes (E-waste)?		
27. Will the project have the potential to cause soil erosion?		
28. Will the project have the potential to cause topsoil loss?		
29. Will the project have the potential to involve soil compaction?		
30. Will the project involve concrete foundations/impervious layers?		
31. Will the project involve equipment on-site fueling or storage?		
Social impacts and community health and safety		
32. Is the land where works will take place free from encumbrances and is in possession of the Public/government land?		
33. Can the government demonstrate that they are the legal title holder of the land?		
34. Will the work activities require temporary or permanent land acquisition (other than willing buyer-seller at market price), reduce other people's access to economic resources (land, water, pasture, crops) upon which they rely, require taking of crops or temporary occupation of lands, or evict squatters?		
35. Will people permanently or temporarily lose access to facilities or services?		
36. Will the services be temporarily relocated during refurbishment/construction?		
37. Will sub-project generate temporary labor influx during construction in excess of 20 workers?		
38. Will the sub-project cause traffic impacts and accessibility issues?		
39. Could the sub-project cause utility damage?		
40. Will the sub-project affect physical integrity of weak structures/houses adjacent to construction sites?		
41. Will the project have the potential to adversely affect vulnerable people and underserved groups (e.g., elderly poor pensioners, physically		

challenged, women, particularly head of households or widows, etc.) living in the area?		
Occupational Health and Safety		
42. Will the sub-project involve potential physical hazards?		
43. Will the sub-project involve fire hazards?		
44. Will the sub-project involve slippage, falling & working at heights?		
45. Will the sub-project involve manual handling and lifting?		
46. Will the sub-project involve electrocution?		
47. Will the sub-project involve excavation works?		

Characteristic of Sub-project or Activity:	Yes/No	Observations
1. Does the facility have good access, a functional entry, and a road that does not need major repairs or extensions?		
2. Is the work site flat, clear, and level, and not require cutting of slopes or major earth movement, except small amounts?		
3. Is the work site outside a flood zone, wetland, river or coastal flood plain, an area with high water table, or a poor drainage zone?		
4. Does the project involve hazardous materials management and disposal (e.g. asbestos, medical or infectious waste, solvents or gasoline) excepting small amounts?		
5. Could the project activities affect any natural or protected areas, Parks, natural areas, or Forest Reserves within 1 km of the Project?		
6. Could the works adversely affect cultural property, including archeological sites or historic buildings, artwork, visual aesthetics, or other physical cultural resources?		
7. Does the activity or project involve the use of pesticides, herbicides, or other agents to destroy pests or control vectors?		
8. Is the site chosen for this work free from encumbrances and is in possession of the Public/government/community land		
8a. Can the government demonstrate that they are the legal title holder of the land?		
9. Will the work activities require temporary or permanent land acquisition (other than willing buyer-seller at market price), reduce other people's access to economic resources (land, water, pasture, crops) upon which they rely, require taking of crops or temporary occupation of lands, or evict squatters?		
10. Will people permanently or temporarily lose access to facilities or		

services?		
11. Will sub-project generate excessive labor influx during construction.		
12. Might the work activities adversely affect vulnerable people and underserved groups (e.g., elderly poor pensioners, physically challenged, women, particularly head of households or widows, etc.) living in the area?		

As previously stated, it is expected that the sites to be refurbished and small civil works will pass the screening criteria with no problem and will be found suitable for improvements. In such cases the standard mitigation measures would be all that is needed to minimize any risk of negative environmental and social impact.

5.2 Design Phase

It is expected that the projects would receive adequate technical review by qualified technical professionals to ensure their technical and environmental soundness. Engineering review for all plan details and designs would be integral in this process.

The design should include adequate wastewater treatment and disposal systems, such as package treatment plants and chlorination, where appropriate for the size, capacity, and services offered at the particular health facilities. The design should also include adequate facilities for management of solid waste and medical waste, where appropriate for the size, capacity, and services offered at the particular health facilities.

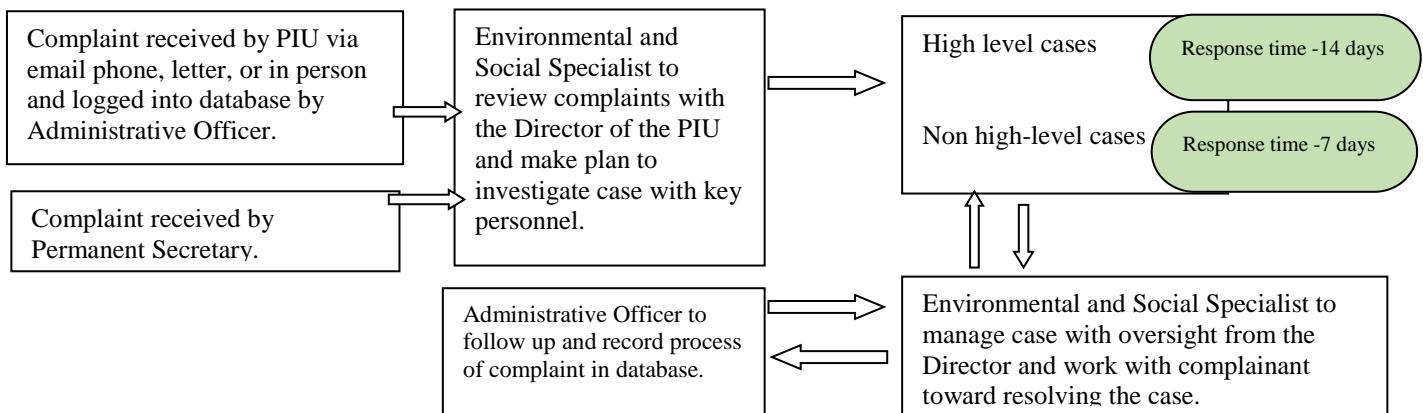
If local permits are required from the Physical Planning Department or other agencies, then these should be processed according to regulations. Any conditions or stipulations resulting from local permits must also be added to the ESMP for the works and becomes an additional compliance requirement.

Land acquisition is not anticipated because the health care facility refurbishments will typically occupy the same physical footprint; in addition, the facilities are already located on government (Crown) property. However, adjustments to plans, titling issues, temporary access during rehabilitation or renovation, or other needs may occur that require parcels to be occupied temporarily, purchased, or accessed. In such cases it is necessary to avoid triggering the Involuntary Resettlement Policy (OP/BP 4.12) by the removal of persons or their assets such as crops or structures, or by requiring access or occupation without recourse or recompense. Therefore, any works or activities to be financed as part of this project or at a later stage will be on government lands which are unoccupied and unencumbered by informal settlers or their assets. Demonstration of this ownership will be required as part of the screening and site selection process and is included in the mitigation plan.

Privately owned land or land purchased through willing-seller and willing-buyer is acceptable, provided that the land acquisition must occur by mutual agreement in exchange for a notarized purchase contract based on the market price at the date of acquisition. Any temporary access agreements should be equitable, voluntary, and documented in writing.

5.2.1 Grievance Redress

Communities and individuals who believe that they are adversely affected by a World Bank (WB) supported project may submit complaints to existing project-level grievance redress mechanisms (GRM). During the pre-design phase of the project the Ministry of Health, Social Security and International Business, will develop the GRM to register, track, address and resolve any complaints raised by individuals or groups. All complaints or related issues can be sent to the designated email account or given in person or over the telephone, as posted on the work site, to the attention of the Permanent Secretary, Ministry, Ministry of Health, Social Security and International Business. The flow chart below shows the process for handling complaints.



Flow Chart 1 Basic process for Project level GRM

Reported issues should include a name, date and contact information with a detail description of the case, but anonymous complains can also be received. All reported cases will be logged by the Project Coordinator and directed to the attention of the Office of the Chief Health Planner who will be responsible to assign or escalate the case to the appropriate personnel. Guidance and templates for documenting the processes of the GRM will be taken from examples in Appendix 1. There will be a normal response time of 7 days for each case, however high level cases may require up to 14 or more days for a response. The person responsible for the GRM will direct high level cases to the attention of the Chief Health Planner who will report and further to the WBG representatives where necessary. The unit managing the GRM will maintain a log of all complaints and this log will be used to track each complaint from date received to date resolved and highlight how each case was resolved. In the event that there are concerns with staff of the PIU, these concerns can be addressed to the Permanent Secretary, Ministry of Health Social Security and International Business or to a designated NGO. These records will be available to WB staff during supervision missions.

The WB's Grievance Redress Service (GRS) is another mechanism whereby people aggrieved by a WB project can contact Bank Management directly if they feel harmed by a project. The GRS is based in Washington, D.C., and ensures that complaints received are promptly reviewed and an action plan is established to address concerns. This avenue is available once an individual or a community has taken their complaint up with the project level GRM; this mechanism extends to complaints about procurement.

5.3 Implementation Phase

General impacts typical of small civil works have been identified in the preceding section of this ESMF, and the mitigation actions that will be taken have been identified.

Appendix 1 provides the standard mitigation measures in the form of contract clauses so they can be incorporated into the requirements of the contractor who will undertake the civil works. Additional mitigation measures would be derived from any conditions imposed by any statutory agency who reviewed the sub-projects and provided recommendations or conditionalities. These should also be converted to contract clauses as necessary.

Community engagement during the implementation of works is required in order to minimize social risk and ensure orderly and transparent execution of project activities. Communities also serve an important monitoring function and provide valuable feedback on contractor performance, design, and operation. The Ministry of Health, Social Security and International Business will be required to provide information to communities on a regular basis throughout the works.

6.0 INSTITUTIONAL ARRANGEMENTS

This section of the report describes the link between the predicted environmental impacts, the needed mitigation measures identified during the screening and assessment process, provisions for budgeting the costs of such measures, and the roles of those responsible for ensuring that the mitigation measures are carried out.

6.1 Project Implementation Unit (PIU)

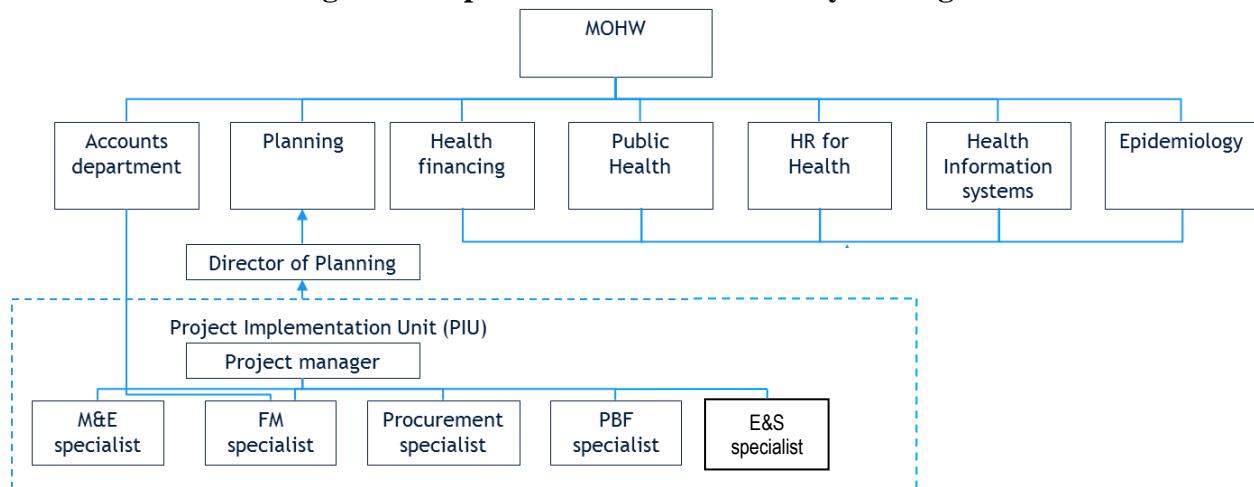
The Ministry of Health, Social Security and International Business will have the overall responsibility for project implementation. The Project Implementation Unit (PIU) will be physically located within the Planning Unit of the Ministry of Health, Social Security and International Business.

A Project Co-ordinator will lead the day-to-day implementation of the project and will report to the Permanent Secretary, Ministry of Health, Social Security and International Business, through the Chief Health Planner, who will function as the Project Manager, on the coordination of efforts with other partners, and for technical coordination of activities financed under the project.

The PIU team will include the following roles: Project Manager, Project Co-ordinator, Staff of the Planning Unit. The persons responsible for social and the environmental safeguards will be based in the Environmental Health Department of the Ministry of Health Social security and International Business and assigned to investigate complaints as they arise. The supervision by the PMU and contractors doing any construction or supervision work will be carried out by the Ministry of Implementation and Infrastructure Development. Assigned Engineers will report to the Permanent Secretary, Ministry of Implementation and Infrastructure Development through the Office of the Chief Technical Officer (CTO), and reports copied to PIU through Permanent Secretary, Ministry of Health, Social Security and International Business.

The figure below provides an overview of the structure that will support and implement the project.

Figure 3. Implementation and Fiduciary Arrangements



6.2 Environmental Performance Clauses for Works Contracts

Standard environmental and social related clauses were developed and are to be appended to or incorporated into the contracts as necessary depending on the type of works to be conducted or the findings of the checklist by the appraising project officer. These form part of the environmental management plan and the mitigation measure presented there. These clauses are general and may be modified to conform to applicable laws and contract procedures and shall remain in force throughout the contract period.

Generic contract clauses are provided in Appendix 1 for the following general conditions for small civil works, roads, buildings, and other works expected to have minor impacts:

- Permits and Approvals
- Site Security
- Discovery of Antiquities
- Worker Occupational Health and Safety
- Noise Control
- Use and Management of Hazardous Materials, fuels, solvents and petroleum products
- Use and Management of Pesticides
- Use of Preservatives and Paint Substances
- Site Stabilization and Erosion Control
- Traffic Management
- Management of Standing Water
- Management of Solid Wastes - trash and debris
- Management of Liquid Wastes

Additional clauses for the following special conditions are also within Appendix 1:

- Management of Medical Wastes
- Management of Asbestos

It is expected that these generic clauses will be incorporated into all contracts, as applicable. In addition, specific project-related recommendations may also be forthcoming from statutory bodies that are part of the permitting agencies such as and these can be added to contract clauses as well. Finally, if an EIA has been conducted for a particular sub-project due to its environmentally sensitive or complex nature (see section 5.1), then the specific recommendations for mitigation measures in that EIA should also be included as contract clauses.

For purposes of cost estimation and budgeting, the contractors should be aware of the existence of the environmental mitigation measures and associated ESMP requirements, and include cost items for such purposes in their proposals.

6.3 Supervision, Monitoring, and Reporting

The person or entity responsible for on-ground implementation and abiding by the contract clauses, recommendations, and mitigation measures will be the contractor. The contractor will be required to provide reports to the PIU on at least a monthly basis, that include adherence to the Generic ESMP and other contract clauses.

The agency with the responsibility to supervise and monitor the various works, activities, and sub-projects is the PIU. The PIU will designate a field representative/s who shall conduct periodic inspections to assure environmental and social compliance and adherence to the ESMF. In addition to WBG requirements, the PIU will also be responsible for ensuring the proper application of any national or local environmental, social and health and safety requirements.

Appendix 4 contains a sample of a monitoring checklist to be used during construction phase (by the Contractor and the Supervising Engineering Consultant - SEC).

Reporting to WBG on the ESMF will be included in quarterly reports under a separate section on Safeguards.

6.4 Health Care Waste Management System (HWMS)

The Ministry of Health will be responsible for implementing the HWMS. The Project Implementation Unit (PIU) will request the services of a qualified consultant (individual or firm) to research and develop a Health Care Waste Management System (HWMS) that should be consistent with ISO 9001 and shall include a capacity building component. A TOR for this is included as Appendix 2.

7.0 PUBLIC CONSULTATION AND DISCLOSURE

The Ministry of Health conducted public consultation sessions using face-to- face presentations. In this regard the ministry held face-to- face consultations with residents in the St. David's Community to

explain the overall goals of the project. The ESMF was also published on the Government of Grenada's Website.

A face-to-face public consultation was held with residents of St. David, who have access to the St. David Health Center. This was facilitated by one of the Community Disaster Community Response groups established in the parish. The draft ESMF was also circulated via e-mail to committee members who attended the community meeting.

The ESMF was also published on the Ministry of Health Website and the Government of Grenada website.

Appendix 1 Contract Clauses for Small Civil Works

The following are standard mitigation measures to address environmental and social impacts and risks of small civil works. These mitigation measures are the core of a generic, standardized ESMP (Environmental and Social Management Plan) for these types of small works and the typical associated minor impacts which can be routinely addressed with Best Management Practice (BMPs). These requirements are general and may be modified to conform to applicable Grenada laws, regulations, including specific requirements or recommendations from statutory permitting agencies, such as the Physical Planning Division or the Ministry of Health, and other contract requirements for such works. These are the mitigation measures which are expected of all professional contractors who are performing civil works and represent the minimum standard of execution for environmental, social and health and safety protection during the execution of such works.

Therefore, this Appendix 1 – Contract Clauses for small Civil Works should be included in the bidding documents and in the Construction Contract with specific Contractors. In addition, if an Environmental Assessment (EA) or Environmental Impact Assessment (EIA) has been conducted for a sub-project due to its environmentally sensitive or complex nature, then the specific recommendations for mitigation measures in that EA or EIA should also be included as contractual requirement.

This Generic ESMP includes 19 sections that address different basic requirements to ensure that the most likely environmental, social and health impacts of the proposed works under this Project are addressed, including basics of a Workers' Code of Conduct and Grievance Redress Mechanism (GRM). Section 20 includes a general checklist to verify compliance with the requirements established herein.

1. Permits and Approvals

The contractor shall be responsible for ensuring that he or she has all relevant legal approvals and permits required to commence works, including any permits required prior to land clearing and removal of trees.

2. Site Security

The contractor shall be responsible for maintaining security over the work site including the protection of stored materials and equipment. In the event of severe weather, the contractor shall secure the work site and associated equipment in such a manner as to protect the site and adjacent areas from consequential damages. This includes the management of stored materials, sanitary wastes, additional strengthening of erosion control and soil stabilization systems and other conditions resulting from contractor activities which may increase the potential for damages.

In the event of emergencies, such as medical emergencies, flooding or fires, the Contractor shall implement an Emergency Response Plan.

3. Site Clearing and Removal of Vegetation and Trees

In Grenada, it is unlikely that removal of vegetation and trees will be required for the proposed upgrading and refurbishing of the health centers under the Project, with the exception of the proposed expansion of infrastructure in Wesley, with construction of additional rooms. Nevertheless, should it be required, contractors should prepare a plan for the site clearing and removal of vegetation and trees. The following procedures must be included, as a minimum:

- The necessary permits must be secured prior to starting to clear the site.
- The usual procedures of signaling and isolation of the area, as to prevent the occurrence of accidents. Pollution controls must also be in place to mitigate dust and noise impacts in surrounding communities. Special care must be taken in case the health facility will continue to operate throughout the refurbishing/construction works.
- Routes of entry and exit of trucks and equipment should be defined in advance, according to the Traffic Management (see section 12).
- The debris generated in removals and demolitions should be segregated, temporary stored onsite and removed to an authorized disposal site according to the Waste Management Plan (see section 14)
- Suppression of vegetation
 - Removal of vegetation must be limited to the authorization issued by applicable authorities in Grenada and according to the proposed suppression plan where all elements will be identified and cataloged (specie, girth and DBH⁵); removal of trees with DBH greater than 14 inches should be avoided, as possible.
 - The areas or the elements to be suppressed shall previously identified and marked with colored tape in order to allow quick visualization and avoid cutting unauthorized trees.
 - Tree cutting shall be performed by specially trained staff. The team shall count with the PPEs and the appropriate equipment and tools.
 - The use of fire or chemicals is strictly prohibited.
 - A certified copy of the authorization to suppress vegetation, including the map of the boundaries of the area of intervention must be maintained onsite.
- In earth movement and earth works, the topsoil rich in nutrients should be stored in temporary areas near work areas for later use in the earthworks and landscaping. When stockpiling *topsoil*, soil pile should not be higher than 1.3 m (4 feet) high and should not remain for more than 1 year and preferably should be used within less than 6 months. Topsoil stockpile should be covered to prevent soil erosion and contamination by weeds and should be treated with *temporary* soil stabilization and erosion, including temporary drainage systems, as measures for erosion control and to prevent siltation.

4. Discovery of Antiquities

If, during the execution of the activities contained in this contract, any material is discovered onsite which may be considered of historical or cultural interest, such as evidence of prior settlements, native or historical activities, evidence of any existence on a site which may be of cultural significance, all work shall stop and the supervising contracting officer shall be notified immediately, and the Chance Find Procedure outlined herein shall be followed:

⁵ Diameter at Breast Height (DBH)

- The area in which the material was discovered shall be secured, cordoned off, marked, and the evidence preserved for examination by the local archaeological or cultural authority.
- No item believed to be an artefact must be removed or disturbed by any of the workers.
- Work may resume, without penalty of prejudice to the contractor upon permission from the contracting officer with any restrictions offered to protect the site.

5. Worker Occupational Health and Safety

The Contractor must designate a person responsible for Hygiene/Safety/Environment who will ensure that the hygiene, safety and protection rules of the environment are followed rigorously by all and at all levels of execution.

All working sites must be equipped with First Aid kits and a responsible person trained in administering first aid treatment. In addition, the nearest additional health services must be identified and advised of the work being performed and the potential for need of ambulance and care in case of medical emergencies during construction. An Emergency Preparedness and Response Plan must be prepared.

The contractor shall ensure that all workers operate within a safe environment. Sanitation facilities shall be provided for all site workers. All sanitary wastes generated as a result of project activities shall be managed in a manner approved by the contracting officer and the local authority responsible for public health. The contractor shall ensure that there are basic medical facilities on site and that there are staff trained in basic first aid. Workers must be provided with the necessary protective gear as per their specific tasks such as hard hats, overalls, gloves, goggles, boots, etc. The contractor shall provide the contracting officer with an occupational health and safety plan for approval by the local health authority prior to the commencement of site activities. The Occupational Health and Safety Plan will include the following minimum content:

- Definition of the responsibilities of the Environmental, Health and Safety Officer
- Procedures for Inspections and Audits
- Job Hazard Analysis
- Manual of safe work procedure⁶ (SWP) for key activities (site clearing, tree removal, trench and excavation, access /egress, installing scaffolds, working on ladder, working on heights, lockout-tagout (LOTO), housekeeping and materials storage, manual and mechanical lifting, lifting and hoisting, confined space entry, fall-arrest rescue, and others, as applicable)
- Training
- Reporting and investigating Accidents, identifying Root Cause, and acting upon prevention and corrective measures.
- Emergency Preparedness and Response Plan addressing as a minimum: fire, medical emergencies and natural hazards emergencies, such as floods and landslides.

The appropriate posting of information within the site must be done to inform workers of key rules and regulations to follow.

6. Noise Control

⁶ Also known as Standard Operating Procedures, or Safe Work Practice.

The contractor shall control noise emissions generated as a result of contracting activities to the extent possible. In the case of site locations where noise disturbance will be a concern, the contractor shall ensure that the equipment is in good working order with manufacturer supplied noise suppression (mufflers etc.) systems functioning and in good repair. Where noise management is a concern, the contractor shall make reasonable efforts to schedule activities during normal working hours (between 8 am and 4 pm). Where noise is likely to pose a risk to the surrounding community either by normal works or working outside of normal working hours or on weekends, the contractor shall inform the contracting officer and shall develop a public notification and noise management plan for approval by the contracting officer.

Specific elements of the noise control activities by the contractor shall include: work activities will occur within specified daylight hours, e.g. 8:00 am to 4:00pm; community / public to be informed in advance of any work activities to occur outside of normal working hours or on weekends; sites should be hoarded wherever possible; during operations, the engine covers of generators, air compressors and other powered mechanical equipment shall be closed, and equipment placed as far away from residential areas and other sensitive receptors as possible; there will be no excessive idling of vehicles at sites; noise suppression equipment or systems supplied by manufacture will be utilized; ensure all vehicles and equipment are properly serviced; the contractor must develop and implement a public notification and noise management plan, particularly when the health centers continue to operate throughout the upgrading works.

7. Use and Management of Hazardous Materials, fuels, solvents and petroleum products

The use of any hazardous materials including pesticides, oils, fuels and petroleum products shall conform to the proper use recommendations of the product. Waste hazardous materials and their containers shall be disposed of in a manner approved by the contracting officer. A site management plan will be developed by the contractor if the operation involves the use of these materials to include estimated quantities to be consumed in the process, storage plans, spill control plans, and waste disposal practices to be followed. This plan and the manner of management are subject to the approval of local authority responsible for safety, and waste management, and the contracting officer.

Elements of the hazardous materials management shall include: contractor must provide temporary storage on site of all hazardous or toxic substances in safe containers labeled with details of composition, properties and handling information (Safety Data Sheets - SDS⁷); the containers of hazardous substances shall be placed in a leak-proof container to prevent spillage and leaching. Hazardous materials may be temporarily stored in areas that have impervious floor, are covered, include secondary containment, controlled access, a logging procedure for entry and removal of materials, and where the containers are stored according to the compatibility of materials.

8. Pest Control and Use and Management of Pesticides

For incidental, minor use of pesticides, the use of pesticides shall be approved by the contracting officer and shall conform to the manufacturers' recommendations for use and application. Any person using pesticides shall demonstrate that they have read and understood these requirements and are capable of complying with the usage recommendations to the satisfaction of the contracting officer. All pesticides to be used shall conform to the list of acceptable pesticides that are not banned by the relevant local authority.

⁷ SDS, formerly known as Material Safety Data Sheet – MSDS.

If termite treatment is to be utilized, ensure appropriate chemical management measures are implemented to prevent contamination of surrounding areas, and use only licensed and registered pest control professionals with training and knowledge of proper application methods and techniques. Construction sites must also ensure that control of rodents is performed. When using or storing pesticides onsite the following must be observed:

- Always store pesticides
 - In a locked, well ventilated cupboard in a storeroom
 - Away from food and water supplies
 - Out of the reach of children
 - In covered properly labelled, intact bottles or packages
- Do not purchase pesticides in, or transfer them to, unlabelled plastic containers or plastic bags
- Do not transport pesticide together with food, animal feed or drinks
- Always use the correct pesticides to control pest or disease
- Read the instruction on the pesticides label before use.
- Use the correct dosage of pesticides according to the instructions on the label
- Observe the safety precaution given on the label
- Do not eat, drink or smoke while using pesticides
- Wear protective clothing as necessary while using pesticides (gloves, eye, shields, respirators, overalls, boots)
- Use the proper application equipment for applying pesticides
- Always ensure that pesticides spray equipment is properly maintained and calibrated
- Do not use empty pesticides containers to store water or drinks, but instead dispose them together with the hazardous wastes.
- Do not wash pesticides equipment and containers in water bodies (rivers, lakes, sea, streams); effluents must not be discharged on soil or in drainage systems without prior treatment.

9. Use of Preservatives and Paint Substances

Paints with toxic ingredients or solvents or lead-based paints will not be used; banned chemicals will not be used on any project. All paints and preservatives shall only be used with the approval of the contracting officer. Information shall be provided to the contracting officer who describes the essential components of the materials to be used so that an informed determination can be made as to the potential for environmental effects and suitability can be made. Storage, use, and disposal of excess paints and preservatives shall be managed in conformance with the manufacturers' recommendations and as approved by the contracting officer. The contractor shall provide the contracting officer with a list of materials and estimated quantities to be used, storage, spill control and waste disposal plans to be observed during the execution of the contract. This plan is subject to the approval of the contracting officer.

10. Site Stabilization and Erosion Control

The Contractor shall implement measures at the site of operations to manage soil erosion through minimization of excavated area and time of exposure of excavated areas, preservation of existing ground cover to the extent possible, provision of approved ground cover. Where excavations are made, contractor shall implement appropriate stabilizing techniques to prevent cave-in or landslide. Measures shall be approved by the contracting officer.

The contractor must ensure that appropriate erosion control measures, such as silt fences, are installed. Proper site drainage must be implemented. Any drain clogged by material or sediment must be unclogged as soon as possible to prevent overflow and flooding. The use of retaining structures and

planting with deep rooted grasses to retain soil during and after works must be considered. The use of bio-engineering methods must be considered as a measure to reduce erosion and land slippage. Keep angle of slopes within limits of soil type. Balance cut and fill to limit steepness of slopes. All slopes and excavated areas must be monitored for movement.

All materials, including chemicals, must be properly stored. The contractor will establish appropriate erosion and sediment control measures such as hay bales, sedimentation basins, and / or silt fences and traps to prevent sediment from moving off site and causing excessive turbidity in nearby streams, rivers, wetlands, and coastal waters.

An erosion management plan will be required where the potential exists for significant sediment quantities to accumulate in wetlands, lakes, rivers and nearshore marine systems. This plan shall include a description of the potential threat, mitigation measures to be applied, and consideration for the effects of severe weather and an emergency response plan.

If works are along coastal marine areas or near major steams and river, water quality monitoring must be done before works begin, and at regular intervals to determine turbidity levels and other quality parameters. Vehicles and machinery will be washed only in designated areas where runoff will be collected, adequately treated to retain sediments and avoid polluting natural surface water bodies.

11. Air Quality

The following conditions apply to work sites for the control of air quality, including dust control:

- Materials such as sand, cement, or other fines should be kept properly covered.
- Cement should be kept stored within a shed or container.
- The sand and fines can be moistened with sprays of water.
- Unpaved, dusty roads should be compacted and then wet periodically.
- During interior demolition debris-chutes shall be used above the first floor.
- Demolition debris shall be kept in controlled area and sprayed with water mist to reduce debris dust.
- During pneumatic drilling/wall destruction dust shall be suppressed by ongoing water spraying and/or installing dust screen enclosures at site.
- The surrounding environment (sidewalks, roads) shall be kept free of debris to minimize dust.
- There will be no open burning of debris / waste material at the site.
- There will be no excessive idling of vehicles at work sites.
- The bins of all haulage vehicles transporting aggregate or building materials must be covered on all public roads.

12. Traffic Management

In the event that refurbishment activities should result in the disruption of area transportation services, including temporary loss of roadways, blockages due to deliveries and site related activities, the contractor shall provide the contracting officer with a traffic management plan including a description of the anticipated service disruptions, community information plan, and traffic control strategy to be implemented so as hours to minimize the impact to the surrounding community. This plan shall consider time of day for planned disruptions, and shall include consideration for alternative access

routes, access to essential services such as medical, disaster evacuation, and other critical services. The plan shall be approved by relevant local authority and the contracting officer.

Elements of the traffic management plan to be developed and implemented by contractor shall include: alternative routes to be identified in the instance of extended road works or road blockages; the public to be notified of all disturbance to their normal routes; signposting, warning signs, barriers and traffic diversions must be clearly visible and the public warned of all potential hazards; provision must be made for the safe passages and crossings for all pedestrians where work-related traffic interferes with their normal route; there must be active traffic management by trained and visible staff at the site or along roadways as required to ensure safe and convenient passage for the vehicular and pedestrian public; Adjustment of working hours to local traffic patterns, e.g. avoiding major transport activities during rush hours or times of livestock movement.

Specifically, the traffic management plan must include:

- Construction vehicles will be restricted to a speed of no more than 10km/h when traversing within the access area to the construction facility.
- When possible, construction vehicles will be restricted to using a specific route, one which minimizes wide interaction of community members with construction vehicles.
- The Contractor shall schedule delivery hours for materials to avoid peak hour traffic and minimize traffic disruption;
- Construction vehicular traffic will be restricted to off-peak hours where possible (e.g., 7:30 am – 8:30 am and 12:30 pm – 1:30 pm) to minimize interaction with community members, particularly school children or users of the health center, if it will be maintained operational throughout the upgrading/refurbishing/construction. If necessary, flag persons shall direct the movement of vehicles on entering the area, within the construction site.
- If needed, Contractors should undertake preparatory activities, such as road shoulder clearing and grubbing and pot hole filling to ensure the thoroughfare is adequate from movement of construction vehicles and community members.
- At no time should there be trucks or other construction equipment left standing on the road way or shoulders. In exceptional situations, the Contractor must submit a request for approval from the Contracting officer, justifying why such situation is necessary and what road signs and other accident preventive measure will be put in place.
- Access to the construction/works site by unauthorized persons shall be restricted. An enclosure shall be installed at an early stage of the civil works. Security gates shall will be installed to further restrict unauthorized access. Persons wishing to enter the construction site must first report to the site office at the entrance of the site.
- All heavy-duty machines shall be operated by competent, licensed and authorized personnel only.
- When appropriate, warning signs shall be installed and positioned at adequate distances of 100 m – 300 m on both ends of the carriageway leading up the construction site to raise awareness to road users.
- No night works or delivery of materials at night shall be permitted.
- During non-working periods (e.g., weekends) all equipment shall be kept at the designated site area to avoid visibility obstruction.
- All stakeholders will be informed of the works to be executed, inclusive of its description, the accurate commencement time, estimated completion time and any potential impact that may occur (updates shall be given as work progresses).
- In the event of accidents or incidents, an incident report shall be recorded, and investigation immediately launched.

13. Management of Standing Water

Under no circumstances shall the contractor permit the collection of standing water as a consequence of contractor activities without the approval of the contracting officer and consultation with the relevant local environmental health authority. Recommendations from that local authority on how to manage and treat the standing water must be implemented. The condition of the standing water must be monitored by the contractor to ensure that it does not present itself as a breeding ground for any pests such as mosquitoes.

14. Management of Solid Wastes -trash and debris; E-Waste

The contractor shall provide the contracting officer with a solid waste management plan as part of a site waste management plan that conforms to the solid waste management policies and regulations of the relevant Grenada authority. Under no circumstances shall the contractor allow wastes to accumulate so as to cause a nuisance or health risk due to the propagation of pests and disease vectors. The site waste management plan shall include a description of how wastes will be stored, collected and disposed of in accordance with current law. Additionally, the contractor shall provide for the regular removal and disposal of all site wastes and provide the contracting officer with a schedule for such removal.

Specific elements of the contractor's waste management plan shall include: contractor to abide by all pertinent waste management and public health laws; waste collection and disposal pathways and sites will be identified for all major waste types expected from demolition and refurbishment activities; debris and demolition wastes will be stored in appropriate bins; all waste will be collected and disposed of properly in approved landfills by licensed collectors; the records of waste disposal will be maintained as proof for proper management as designed; whenever feasible the contractor will reuse and recycle appropriate and viable materials (except asbestos). The solid waste management plan must follow, as a minimum:

- Segregation and classification of wastes according to the 4 common types of wastes found in construction sites, and should be disposed of in collectors (drums or plastic bags):
 - Hazardous Waste (e.g., waste from workshops, such as waste oils, packaging, used towels and toweling, parts, tires, automotive batteries, lamps, material contaminated with oil, fuel, paint, solvent, etc.; medical waste in the “red bags” from the First Aid services);
 - Organic waste (e.g. leftover food, leftover waste, plastic dishes, plastic wrappers and cutlery with food scraps, napkins, etc.);
 - Common waste (office wastes, clean plastic cups of water, coffee and soda; clean plastic bottles; pet bottles; clean plastic parts, packaging);
 - Construction waste (general construction waste, wood, ferrous waste, shavings, wood, remnants of concrete, masonry waste);
- In all generating areas there should be enough collectors for waste collection generated in each activity, so that, in the period between the collection of the collectors, the waste generated remains adequately conditioned.
- To ensure adequate housekeeping and maintenance of the construction site, wastes should be collected frequently as to avoid overflow of collection bins and should be stored provisionally in place reserved and sheltered from the winds and located away from watercourses and neighbors.

- If feasible, wastes could be further segregated in separate and color-coded containers, in the following categories:
 - Organic and common wastes not contaminated with hazardous products
 - Clean recyclable plastics
 - Scrap metal
 - Clean paper and cardboard
 - Clear glass
 - Material contaminated with hazardous materials
 - Solid health wastes
 - Rubber remnant
- Hazardous wastes shall be transported by specially authorized/licensed carriers and disposed in an authorized/licensed facility, with records of collection and disposals maintained for proof of compliance;
- All wastes must be removed from site by authorized/licensed waste collection companies/entities and disposed of in authorized/licensed landfills, with records of collection and disposals maintained for proof of compliance.
- No burning of wastes on site shall be permitted.

14.1 – Electronic Waste Management (E-Waste)

The proposed upgrading/strengthening of the power supply and lighting system, and laboratory data management system may generate limited small to moderate amount of electronic wastes (E-waste). These may include electronic equipment that is near or at the end of its useful life. These products can contain heavy metals like cadmium, lead, copper, and chromium that can contaminate the environment. Therefore, they shall not be disposed of in the trash. Examples of e-wastes that may be generated by the Project include, but not limited to:

- Computer monitors, printers, scanners, keyboards, mice, cables, circuit boards, lamps, clocks, flashlight, calculators, phones, answering machines, digital/video cameras, radios;
- Kitchen equipment (toasters, coffee makers, microwave ovens)
- Laboratory equipment (hot plates, microscopes, calorimeters, fridge, freezers)

Any laboratory equipment that has the possibility of being contaminated with chemical, biological, or radioactive substances, therefore must not be discarded with ordinary waste and must be treated as hazardous waste.

Before starting any civil works, the Ministry of Health in Grenada shall develop and implement an E-Waste Management Procedure to address the e-wastes produced under the Project. The procedure shall identify and classify the types of wastes and its compatibility, segregate all potentially contaminated wastes (mainly from the laboratory), assess potential ways to reuse other e-wastes that are not contaminated, including donation of used equipment that are in working conditions, identify what can be recycled to recover valuable metals, only if dismantling and recovering of materials can be performed safely with no risks to workers, community and the environment.

At a larger scale, an E-Waste MP could contribute to reduce the amount of wastes that are disposed of in the landfill and thus extend its useful life, which is approaching its end (with only 2 years to go).

15. Management of Liquid Wastes

The contractor shall provide the contracting officer with a liquid waste management plan as part of a site waste management plan that conforms to the waste management policies and regulations of the relevant Grenada authority. Under no circumstances shall the contractor allow liquid wastes to accumulate on or off the site, or to flow over or from the site in an uncontrolled manner or to cause a nuisance or health risk due to its content. The site waste management plan shall include a description of how these wastes will be stored, collected and disposed of in accordance with current law. Additionally, the contractor shall provide for the regular removal and disposal of all site wastes and provide the contracting officer with a schedule for such removal.

Specific elements of the contractor's liquid waste management plan shall include: contractor to abide by all pertinent liquid waste management and public health laws; waste collection and disposal pathways and sites will be identified for all major waste types expected from demolition and refurbishment activities; liquid and chemical wastes will be stored in appropriate containers separated from the general refuse;; liquid wastes must not be allowed to accumulate on or off the site, or to flow over or from the site in an uncontrolled manner or to cause a nuisance or health risk due to its contents.

In general, liquid effluents of small civil works will be only comprised of the sanitary effluents from workers and management. If public sewage system is not available, adequately-sized septic systems should be installed, according to the number of users.

16. Special Condition - Management of Medical Wastes during refurbishment works

In the event that the contractor discovers medical wastes, the contractor shall provide the contracting officer with a medical waste management plan as part of a site waste management plan that conforms to the waste management policies and regulations of the relevant Grenada authorities. The plan shall include a description of how these wastes will be stored, collected and disposed of in accordance with current law. The contractor must ensure that all persons handling medical wastes are provided with proper protective clothing. All medical wastes must be secured in specially labelled and sealed containers and disposed of according to relevant local legislation at specified disposal sites. Medical wastes must be kept separate from the other waste streams on site.

The waste management plan provided by the contractor must ensure that all persons handling medical wastes are provided with proper protective clothing. All medical wastes must be treated as hazardous. All medical wastes must be secured in specially labelled and sealed containers separate from other wastes streams. All medical wastes must be disposed of according to relevant local legislation at specified disposal sites.

17. Special Condition - Management of Asbestos during refurbishment works

In the event that during the course of work activities the contractor discovers asbestos as part of the existing site that requires stabilization and removal, the contractor shall contact the relevant local authorities and the contracting officer immediately. If work has already commenced, all work in the area must stop immediately. An asbestos management plan must be prepared by the contractor and approved by the relevant local health and waste management authorities and the contracting officer describing how this material will be stored, collected and disposed of in accordance with current law, and identifying the approved experienced professional who will undertake this work. The plan must include:

- Description of the issue and extent of contamination
- Site safety measures
- Stabilization techniques to be employed
- Storage and transport plan
- Approved disposal procedure
- Worker awareness and training
- Appropriate PPE

In preparing the plan, the contractor should liaise with the relevant local health and waste management agencies to ensure that the adequacy of the measurements being proposed.

Site management shall consist of enclosing relevant sections of the site with appropriate material by the contractor. Where possible the asbestos and its location must be appropriately contained and sealed to minimize exposure, and any asbestos shall be marked clearly as a hazardous material. Stabilizing friable asbestos will be done prior to removal (if removal is necessary) and it will be treated with a wetting agent to minimize asbestos dust. Asbestos will be handled and disposed by skilled & experienced professionals using appropriate PPE (personal protective equipment) such as respirators and tyvec suites which will be provisioned to workers to protect them and prevent contamination with asbestos fibres. Respiratory protection together with measures to prevent the contamination of clothing and inadvertent transport of asbestos fiber off-site shall be provided to all exposed workers. If asbestos material is to be stored temporarily, the wastes should be securely enclosed inside closed containments and marked appropriately. Security measures must be implemented against unauthorized removal of asbestos from the site. No removed asbestos will be reused.

18. Workers' Code of Conduct

The objective of the Worker's Code of Conduct (hereinafter, the Code) is to avoid or minimize as much as possible, any negative impact that could be produced because of interrelations between the workers inside the local areas of influence and the outskirts of the Project Area. The Contractor shall implement a Workers' Code of Conduct consistent with the guidelines included herein to assist all employees to:

- Understand expected standards of conduct and behavior;
- Comply with relevant laws and policies;
- Demonstrate and promote good ethical work practice;
- Respect colleagues, supervisors and community members.

Contractors shall ensure that each worker receives a written copy of the Code as part of the induction process and as part of the Contract. As a requirement to be hired, all workers must sign a copy of the Code, where they acknowledge it and certify they have read it and accepted its terms, promising to comply with its terms thoroughly and at all times. Additionally, copies of the Code shall be made available at a visible location at the project site.

Under the Workers' Code of Conduct all workers shall:

- Consider people equally without prejudice or favor;
- Act professionally with honesty, consistency and impartiality;

- Take responsibility for situations, showing leadership and courage; and
- Place the public interest over personal interest.
- Observe standards for safety.
- Be fiscally responsible and focus on efficient, effective and prudent use of resources.

The workers are obliged to comply with the rules and procedures indicated in the Code, so as to maintain good relations with the local community in the direct area of influence of the Project. Any worker may be subject to disciplinary actions and/or may be fired if their behavior while he/she is employed on the project goes against the rules stated in the Code. However, workers shall have access to the Grievance Redress Mechanism (GRM) for the Project (see section 19).

Under the Workers' Code of Conduct, as a minimum, worker shall comply with the following rules:

Rules Regarding the Local Population

- The local population is defined as all people that live within the direct area of influence of the Project, or in the areas used for the transportation of equipment and materials required for the activities of the Project.
- All workers are expected to behave adequately at all times and must avoid improper relations with the local population. The Contractor will not tolerate any form of harassment or discrimination, including behaviour, comment, jokes, slurs, email messages or any other social media, pictures, photographs, or other conduct that contributes to an intimidating, disrespectful or offensive environment.
- All workers shall avoid any discriminatory conduct based on gender, age, disability, race, language, culture, political affiliations, philosophy, religion, or any other basis.
- All workers must comply, at all times, with all applicable environmental and health and safety rules and regulations.
- Should the worker fail to comply with the Code or behave in such a way that he/she creates a problem with the local population, the corresponding action must be communicated to the Contractor, detailing what happened, so that the Company can carry out an investigation.

Rules regarding the Construction

- All workers are required to show at all times a transparent and honest behavior, and a high level of personal responsibility and professionalism, either in or out of the Project Area.
- All workers shall comply with all applicable laws, rules and regulations.
- Workers shall immediately inform management about any kind of sickness or symptom that may affect their ability to carry out their work-related obligations properly.
- Workers shall use adequate personal protection equipment during their activities within the Project Area, including Project Vehicles.
- Workers are not allowed to smoke or make an open fire within or in the surroundings of the Project Area or near any Project Property, including Project Vehicles.

- Workers are not allowed to engage in gambling while at work and using company assets for gambling are prohibited, including during breaks. For purposes of this standard, “gambling” is defined as playing a game for money or property or betting on an uncertain outcome. Prohibited gambling activities include, but are not limited to: Games (e.g., cards, dice, and dominoes) played for money or property, including electronic games (online poker, roulette, etc.); betting on sporting events, bingo, etc.
- Workers are forbidden to possess, use or carry any kind of illegal drugs, medical paraphernalia, narcotics or alcoholic beverages within the Project Area or any Project property, including Project Vehicles.
- Workers are not allowed to possess or carry weapons, such as firearms, explosives, ammunitions, knives, clubs, etc., within the Project Area or any Project Property, including Project Vehicles.
- All workers shall not receive or hand over money, goods or other objects of value in order to obtain benefits, receive favours or influence decisions, third parties, or themselves.
- Workers shall not use Project funds or equipment, or other articles provided for the Project for their personal benefit or any other unauthorized use.
- Pets are not allowed in the Project Area.
- Fishing, hunting and deforestation is also forbidden within the Project Area and its immediate surroundings.
- For security reasons, workers may not abandon the Project Area without permission.

19-Grievance Mechanism

The arrangements for a grievance redress mechanism (GRM) is included in this Generic ESMP with the objective to formalize the management of grievances at the Contractor’s level, to minimize the social risks to the Project and to resolve issues as they arise. The grievance process outlined here, provides an avenue for individuals to voice their concerns and gives transparency on how grievances will be managed internally, which aims to reduce conflict and strengthen relationships between external stakeholders.

The Contractor’s team shall meet and discuss, inter alia, grievance and resolutions. The Contractor shall designate a Responsible Person (usually the Environmental, Health and Safety Officer) to implement the GRM and ensure that all grievances are properly and timely recorded, evaluated, and responded to within a reasonable timeframe that is communicated to the complainant. Records of all complaints shall be kept for future references and lessons learned.

The grievance redress mechanism procedure described herein shall apply to all employee and external stakeholders during the construction activities. However, at the Project level, a GRM will be available for the life of the Project, including the operational phase of the facilities.

Term	Definition
Grievance	An issue, concern, problem, or claim (perceived or actual) that an individual or community group wants addressed by the company in a formal manner.
Grievance Mechanism	A formalized way to accept, assesses, and resolve community complaints concerning the performance or behavior of the company, its contractors, or employees. This includes adverse economic, environmental and social impacts.
Internal Stakeholders	Groups or individuals who work directly within project, such as employees and sub-contractors.
External Stakeholders	Groups or individuals outside the project who are not directly employed or contracted but are affected in some way from the decisions of the project, such as customers, suppliers, community, NGOs and the government.

GRIEVANCE REPORTING CHANNELS

The Contractor shall communicate this procedure to its workers and external stakeholders to raise awareness and offer transparency of how stakeholders can voice their grievances. Various channels for external stakeholders to vocalize their grievances formally include:

By Phone

By telephone to Personnel	Telephone Number
On site health and safety officer	(Include #)
EHSS Personnel	(Include #)
Project Manager/Site Manager	(Include #)

Face to face

Stakeholders can voice their grievance to the Onsite Health and Safety Officer, or any supervisory employee who will then escalate using the correct process.

By E-mail

By E-mail to Personnel	Telephone Number
On site health and safety officer	(Include email)
EHSS Personnel	(Include email)

Project Manager/Site Manager (Include email)

Grievance shall also be accepted if provided in written, by mail, to the Project/Site Manager and if received during stakeholder consultation meetings or other community interactions.

The Grievance Mechanism Process

Receive Grievance

In Person/ over the phone/by email or in public meetings/stakeholder engagement events

If a grievance is received face to face or over the phone/e-mail and the stakeholder wishes to address the grievance formally, it is the responsibility of the employee who receives the grievance to complete a Grievance Lodgement Form (see example below). Once the form is completed the employee will then pass the form on to the EHSS Personnel for processing.

Evaluate and Investigate

All formal grievances will be logged in the External Grievance Register (see example below) and Grievance Lodgement Forms will be saved in Contractor's database for record of correspondence.

Screen⁸

Category	Description	Grievance Owner
Level 1	When an answer can be provided immediately and/or Contractor is already working on a resolution	Onsite health and Safety Officer
Level 2	One off event	Supervisor level or above
Level 3	Complaint is repeated Any complaint (one off or repeated) that indicates breach of law or applicable policy/regulation	Executive level Construction Manager/ EHSS Personnel/ EHSS Specialist
	High-profile grievances that if not resolved promptly may represent significant risks to the environment or community.	

Acknowledge

A grievance will be acknowledged, by the grievance owner, within two working days of a grievance being submitted. Communication will be made either verbally or in written form (stakeholders will

⁸ The onsite health and safety officer is responsible for liaising on with the external stakeholder/s and work on a resolution. Grievances will be screened depending the level of severity in order to determine how the grievance is approached and addressed. See table categorizing the different levels

outline their preferred method of contact on the Grievance Lodgement Form if they have used this form, (see example below in Table 1). The acknowledgement of a grievance will include a summary of the grievance, method that will be taken to resolve the grievance and an estimated timeframe in which the grievance will be resolved. If required, the acknowledgment provides an opportunity to ask for any additional information or to clarify any issues.

Investigate

The grievance owner is responsible for investigating the grievance. The investigation may require the grievance owner to make site visits, consult employees, contact external stakeholders and complete other activities. Records of meetings, discussions and activities will all be recorded during the investigation. Information gathered during the investigation will be analyzed and will assist in determining how the grievance is handled and what steps need to be taken in order to resolve the grievance.

Act

Following the investigation, the grievance owner will use the findings to create an action plan outlining steps to be taken in order to resolve the grievance. The grievance owner is responsible for assigning actions, monitoring actions undertaken and making sure deadlines are adhered to. Once all actions have been completed and the grievance owner feels the grievance has been resolved, they will then formally advise the external stakeholder via their preferred method of contact.

Follow up and close out

The grievance owner will make contact with the external stakeholder/s three weeks after the grievance is resolved. When contacting the external stakeholder, the grievance owner will verify that the outcome was satisfied and also gather any feedback on the grievance process. Minutes of the meeting will be recorded and saved in database. Table 2 provides an example of a Grievance Register format. If required, the grievance owner may need to follow up with the external stakeholder on numerous occasions to confirm all parties are satisfied.

Appeal

If the external stakeholder is unhappy with the resolution and/or does not agree with the proposed actions, then the grievance owner needs to escalate the matter to the executive management team. The executive team will review the grievance and all documentation gathered throughout the investigation and determine whether further actions are required to resolve the grievance. The Contractor is fully committed to resolving an internal/external stakeholder's grievance so if we are unable to resolve a complaint or a stakeholder is unhappy with the outcome, the Contractor may seek advice from other independent parties.

Reporting

Information outlining the number of grievances, time to resolution and outcomes of grievances will be communicated in Contractor's monthly reports. The GRM may be evaluated and updated when required, to continually improve its stakeholder engagement.

Storing of grievances: All records, including grievance forms, investigation notes, interviews and minutes of meetings will be securely filed in the Contractor's database to ensure privacy and confidentiality is maintained for all parties involved.

Table 3 below presents an example of a Grievance Redress Mechanism checklist to assist in the development of a Contractor-level GRM.

TABLE 1: EXAMPLE OF GRIEVANCE LODGMENT FORM

Name: _____ Address: _____
Company (if applicable): _____
Date: _____ Time: _____
Preferred Contact Method: Telephone Email

Please provide contact details: _____

Supporting documents attached? Yes No

How often have you experience this issue? Once 2-5 times all the time N/A

Please provide details of your grievance
(Problem/Complaint)

What outcome are you seeking?

Additional Information

Claimant Signature: Date: _____
.....

Contractor' Representative Signature: Date:
.....

Office Use only Received By:

Stakeholder

Reference:

Forwarded to Env. Officer On
(Date): _____

TABLE 2: EXAMPLE OF GRIEVANCE REGISTER

Nature of Incident/ Complaint/ Correspondence	Stakeholder	Date Received	Grievance Owner/ Received by	Level (1, 2, 3)	Grievance Description and Cause	Outcome	Please indicate 'accepted' or 'not accepted'.	Actions/ Notes	Signature of Contractor and Date

TABLE 3 – EXAMPLE OF A GRM CHECKLIST

Process	Description	Time frame	Responsibility & Remarks
Establish composition of Complaint Committee members & procedures	Set up Complaint Committee (CC); Publish article in newspaper and provide notice the on-work site before the start date of works and provide contact information for complainants receiving.	2 weeks before start of civil works	Complaint Committee comprises of Facilities Manager, Contractor's Project Manager, others (as applicable)
Reception of grievance	Complaints can be filed face to face, via phone, via letter, or via e-mail, or recorded during public/community interaction	Day of receipt	Email: add Phone: add Postal address: add
Grievance assessed and logged	Significance assessed, and grievance recorded or logged (i.e. in a log book)	4-7 days upon receipt	Significance criteria Level 1 - one off event; Level 2 - complaint is widespread or repeated; Level 3- any complaint (one off or repeated) that indicates breach of law or applicable policy/regulation
Grievance is	Acknowledgement of	4 - 7 Days upon	CC Secretariat confirms

acknowledged	grievance to complainant	receipt complaint	receipt of the complaint to the complainant via e-mail or letter
Development of response	Grievance assigned to appropriate party for resolution Proposal response with input from management	4 - 7 Days upon receipt complaint 10 - 14 Days upon receipt complaint	CC
Response signed off	Redress action approved at appropriate levels	4-18 days upon receipt of complaint	CC; for level 2 and 3 complaints also, Contractor Management /PIU
Implementation and communication of response	Redress action implemented and update of progress on resolution communicated to complainant Redress action recorded in grievance log book	18-24 days upon receipt of complaint	Contractor/PIU
Complaints Response	Obtain confirmation complainant that grievance can be closed or determine what follow up is necessary	24-30 days upon receipt of complaint	CC
Close Grievance	Record final sign off grievance If grievance	30 – 34 days upon receipt of	Final sign off by CC and for level 2 and 3

	cannot be closed, obtain expert advice third party, refer to mediation or ultimately court of law (as applicable)	complaint	complaints, Contractor Management/PIU
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20. Verification Checklist

This ESHS checklist aims at facilitating verification of compliance with the requirements established herein for all small civil works performed under this Project. By incorporating the checklist in the bidding documents, Contractors are aware of the specific elements that will be supervised and inspected and can adequately plan to ensure compliance. In addition, it also serves as an example for the Contractor's ESHS Specialist to perform its own supervision and reports.

The checklist has four sections:

- Part 1 This section describes the specific civil works project activity
- Part 2 This section describes the general conditions that will be checked before and during civil works activities;
- Part 3 This section describes the specific safety checks that will be done before and during civil work activities;
- Part 4 This section is a checklist to monitor compliance with the procedure of the grievance redress mechanism and the handling of complaints relating to the works.

This checklist can also be used as an example to be developed by the PIU officer responsible for ESHS aspects, according to the specifics works performed at each site.

Part 1: description of specific civil works project activity

Item	Yes/No/ Describe
Project details (attach separate construction documents plans and photos)	

Consultations	
Identify when public was informed about the works	
Inform existing complaints	
Building permits required and obtained? Details	
Date of commencement of works	
Completion of works	
Final technical Drawings and specification reviewed and approved?	
Evidence	

Part 2: General checklist

CONDITIONS	CHECK AS APPLICABLE/ Add pictures of any non-conformities observed
Respect for the national laws and regulations. The Contractor and subcontractors must: know, respect and apply the laws and regulations in force in the country relating to the environment, to the disposal of solid and liquid wastes and noise standards, to the working hours, etc.; to take all appropriate measures in order to minimize the impacts on the environment; to assume the responsibility for all complaints linked to failure to respect the environment.	
Permits and authorizations before works. All implementation of works must be subjected to initial procedure of information and administrative authorizations. Before beginning works, PIU or Contractor must obtain all the necessary permits for the implementation of planned works. Before the start of works, PIU or Contractor must confer with the residents with whom arrangements	

can be made for facilitating the progress of the works. This can be done by articles in newspaper, internal newsletters and website of Contractor/PIU.	
Meeting of works take off. Before the starting of works, a kick-off meeting needs to be organized with PIU/contractor(s)/engineer, to discuss the scope of works, their duration, Safety and Health plan, etc.	
Use of local labor. It is preferred that the Contractor use as much as possible local staff/workers. Where qualified staff is lacking, labor outside Grenada can be hired.	
Respect for work schedules. The Contractor must ensure that the work schedules respect the laws and national regulations in force as well as the local environment. All derogation is submitted, as far as possible, for the approval of PIU. the Contractor must avoid executing works during the hours of rest, Sundays and public holidays.	
Protection and safety of construction work staff. The Contractor must place at the disposal of the staff protective clothing that are in a good state, as well as all protective accessories and security appropriate for their activities (helmets, boots, belts, masks, gloves, glasses, etc.). The Contractor must keep strict watch on the wearing of the protective facilities in the works areas. A permanent control must be done to this effect and, in case of default corrective measures (warning, penalization, and dismissal) must be applied to the concerned staff.	
Safety of construction site. The Contractor needs to ensure that the necessary safety materials (fire extinguishers, blankets, etc.) are on site during the execution of the works. Scaffolding, portable stair cases, etc. need to be stable and safe according to regulations. Safe work procedures and practices must be implemented.	
Responsibility for Hygiene, Security and the Environment. The	

<p>Contractor must designate a person responsible for Hygiene/Safety/Environment who will ensure that the hygiene, safety and protection rules of the environment are followed rigorously by all and at all levels of execution, for the workers as well as for the population and other people in contact with the works area. The Contractor must prohibit access of the works area to the public and protect the area with fencing and road signs to indicate different entrances as appropriate and to take all measures for order and security to prevent accidents</p>	
<p>Measures against hindrances to traffic. The Contractor must avoid obstructing public access and must permanently maintain the flow of traffic and access for residents during the entire civil works implementation period. The Contractor will ensure that no excavation or trench remains open when not in immediate use, without adequate sign boards accepted by PIU and ensure that the temporary deviations allows movement without any danger.</p>	
<p>Care for the works area and re-organization at handing over of the site. The Contractor should ensure it is clean for immediate use. Contractor cannot be relieved of commitments and responsibility concerning their use without the good state of the site having been confirmed. The Contractor will take care of necessary arrangements to restore the site to a good condition. Contractor is held responsible for the removal of all equipment and materials and properly dispose of what may be considered waste and cannot abandon these items on the site or in the vicinity. Once the works are completed, the Contractor must: (i) withdraw the materials, solid and liquid waste, excess materials, fences etc. (ii) rectify the defects of the drainage system and fill all excavated zones; (iii) afforest the zones initially deforested with suitable species, in collaboration with the local forestry services; (iv) protect and ensure safety from the remaining dangerous works (wells, open</p>	

<p>trenches, protrusions, etc.); (vi) make the pavements, sidewalks, gutters, rails and other works returned safely accessible to the public; (vi) decontaminate the polluted soils (the contaminated parts must be cleaned and covered with sand); and (vii) clean and destroy the drainage pits. After the withdrawal of all materials, Contractor must produce written minutes reporting restoration of the site and include this in the minutes of receipt of works.</p>	
<p>Protection of unstable zones. During the dismantling of the works in unsteady places, the Contractor must take the following precautions not to accentuate the unsteadiness of the ground: (i) avoid any heavy circulation and any overload in the area of unsteadiness; (ii) preserve as much as possible the plant cover or reconstitute this later by using local species adapted in case of risks of erosion.</p>	
<p>Notification of noncompliance. The construction supervisor at PIU notifies the contractor in writing of all cases of defect or noncompliance of the environmental and social measures. The Contractor must correct all defects in accordance with the instructions duly notified to him by the construction supervisor. The resumption of works or extra works resulting from noncompliance of contract provisions are at the cost of the Contractor.</p>	
<p>Sign boards for the works site. The Contractor should place, before the start of the works and every time the need arises, sign boards a long distance from the site (exits, routes used by the engines, etc.) in accordance with the laws and regulations in force.</p>	
<p>Management of solid wastes. The Contractor must deposit domestic wastes in insulated trash cans that should be emptied periodically. The Contractor must eliminate or recycle wastes in an ecological and rational way, or send them, if possible, to existing dump sites.</p>	
<p>Protection against noise pollution. The Contractor is required to</p>	

limit the noises in the work area that could seriously be a nuisance to the residents, either over a long time, or by their long duration outside of the normal hours of work. The levels not to be exceeded are: 55 to 60 decibels during the day; 40 decibels at night.	
Public services and assistance. The Contractor must imperatively provide access to public and emergency services in all places. When a street is blocked, the Contractor must study with the PIU arrangements for the maintenance of the access for vehicles from the fire and ambulance services.	
Contractor Journal. The Contractor must update a journal of the building site, in which will be consigned the complaints, failures or incidents with a significant impact on the environment or with an incident with the population. The Contractor must inform the public in general and the bordering populations in particular, of the existence of this journal, with the indication of the place where it can be consulted.	
Grievance Redress Mechanism. Please refer to Part 4 below	

Part 3: Construction safety checklist

• Personal protective equipment (PPE)	Yes	No	N/A	Comments/pictures of non-conformities
Hard hats: Supplied by employer and worn when required				
Boots: Supplied by employer and worn when required				
Hearing protection: Supplied by employer and worn when required				
Eye protection: Supplied by employer and worn when required				
Respiratory protection: Supplied by employer and worn when required				
Gloves: Supplied by employer and worn when required				

• Ladders at the worksite				
Correct size and material for the job				
Used correctly, firm foundation, fully opened,				
Free from obvious defects				
• Scaffolds at the worksite				
Fall protection used if over 10 feet tall				
Set up on levelled, stable footing,				
Platform appropriate width for type of scaffold				
Footboard and guardrail				
Means of access				
• Fall protection at the worksite				
Fall protection provided for heights 6 ft. or more				
Slide guards are installed across full width and all sides				
Guardrails are constructed sturdily				
• Machine hazards; power tools and machines used at this site				
Workers have appropriate PPE and keep clothing away from machinery				
Workers are trained on the use of power tools				
Machines are guarded as needed				
• Heavy machinery / building equipment (as applicable)				
Workers are trained on the proper procedures to safely operate all pieces of equipment they will be working with				
Workers are aware of surroundings. Be aware of swing radius. When digging all underground utilities, such as sewer, water,				

gas and electrical, have been identified and clearly marked				
• Heat stress: if is heat a major problem at this site				
Are workers provided with enough water and appropriate rest breaks				
• Electrical hazards: if are present at this worksite				
Work on electrical circuits or energized equipment is begun only after all power sources have been identified, de-energized and locked out or tagged out (LOTO).				
Overhead and underground electrical power lines are located, identified, and avoided				
Work performed by authorized ad competent personnel				
• Actions or changes				
Talked to your organizers about health and safety concerns and possible changes/training				
Talked to foreman or contractor about health or safety concerns				
Suggested changes in equipment or procedures				

Part 4: GRM Checklist

Process	Description	Yes	No	Evidence/Comments
Reception of grievance	Complaints can be filed face to face, via phone, via letter, or via e-mail, or recorded during public/community interaction			
Grievance assessed and logged	Significance is assessed, and grievance is recorded or logged (i.e. in a log			

	book)			
Grievance is acknowledged	Acknowledgement of grievance to complainant			
Development of response	Grievance assigned to appropriate party for resolution			
Response signed off	Redress action approved at appropriate levels			
Implementation and communication of response	Redress action implemented and update of progress on resolution communicated to complainant; Redress action recorded in grievance log book			
Complaints Response	Confirmation from complainant that redress action is accepted...			
Closed Grievance	Record of final sign off grievance			
Grievance not closed	If grievance cannot be closed, record of follow-up step, as applicable (third party advice, mediation, court of law.			
Other (as needed)				

Appendix 2 TOR for Consulting Services to develop a Health Care Waste Management System (HWMS)

Please read and add any information or requirements that you think are needed for your country. And complete the highlighted bits.

1. Program Background

The Government of Grenada with the assistance of the WBG is developing the OECS Project to Improve preparedness capacities of health systems for public health emergencies in the OECS region.

The project will include improvements and refurbishments of up to insert five facilities. including equipment inventory, procedures provided, and infrastructure, based on a survey to be conducted during implementation. Under the project, the national health care waste management plans will be updated for activities that include the minor refurbishments and the proper disposal of medical equipment. The development of the HWMS will also include capacity-building for health care workers through occupational health and safety training, including exposure to diseases, medical waste and the use of certain equipment with radiation. Accordingly, the Project Implementation Unit (PIU) under the MOHW is requesting the services of a qualified consultant (individual or firm) to research and develop a Health Care Waste Management System (HWMS).

2. Technical Background

According to the WHO⁹, waste and by-products from the health sector cover a diverse range of materials, as the following list illustrates:

⁹ <http://www.who.int/mediacentre/factsheets/fs253/en/>

- Infectious waste: waste contaminated with blood and other bodily fluids (e.g. from discarded diagnostic samples), cultures and stocks of infectious agents from laboratory work (e.g. waste from autopsies and infected animals from laboratories), or waste from patients with infections (e.g. swabs, bandages and disposable medical devices);
- Pathological waste: human tissues, organs or fluids, body parts and contaminated animal carcasses;
- Sharps waste: syringes, needles, disposable scalpels and blades, etc.;
- Chemical waste: for example solvents and reagents used for laboratory preparations, disinfectants, sterilants and heavy metals contained in medical devices (e.g. mercury in broken thermometers) and batteries;
- Pharmaceutical waste: expired, unused and contaminated drugs and vaccines;
- Cytotoxic waste: waste containing substances with genotoxic properties (i.e. highly hazardous substances that are, mutagenic, teratogenic or carcinogenic), such as cytotoxic drugs used in cancer treatment and their metabolites;
- Radioactive waste: such as products contaminated by radionuclides including radioactive diagnostic material or radio therapeutic materials; and
- Non-hazardous or general waste: waste that does not pose any particular biological, chemical, radioactive or physical hazard.

Health-care waste contains potentially harmful microorganisms that can infect hospital patients, health workers and the general public. Other potential hazards may include drug-resistant microorganisms which spread from health facilities into the environment. Adverse health outcomes associated with health care waste and by-products also include:

- sharps-inflicted injuries;
- toxic exposure to pharmaceutical products, in particular, antibiotics and cytotoxic drugs released into the surrounding environment, and to substances such as mercury or dioxins, during the handling or incineration of health care wastes;
- chemical burns arising in the context of disinfection, sterilization or waste treatment activities;
- air pollution arising as a result of the release of particulate matter during medical waste incineration;
- thermal injuries occurring in conjunction with open burning and the operation of medical waste incinerators; and
- radiation burns.

The project may create an increase in use and scope of services, resulting in additional sources of medical waste needing proper treatment and disposal. This is also the case for work during emergency response or epidemics. The health and safety of health care workers could be affected by waste management practices as well as by hygiene conditions, isolation and storage procedures for bioinfectious, radiologic or genotoxic waste. Such risks may also affect the nearby communities.

Medical waste generated across the health can be classified according to internationally accepted waste categories as defined by the World Health Organization (WHO):

Across the Public Health System waste is segregated

At the present time, there is a Biomedical Waste Management Policy; however there is no formalized plan for health care waste management in Grenada. Practices are however in place for the collection of sharps in sharp containers, the segregation (using colour coded bags) and disposal of waste as required, either through the municipal garbage disposal system for non- hazardous waste or incineration for hazardous waste. There is a programme in place for the scheduled collection and disposal of sharps. There are also documented procedures for the management of cytotoxic waste.

The four (4) major public hospitals in Grenada generate approximately 1300 kilograms (Kg) of waste daily (General Hospital, Princess Alice, Princess Royal and Mt. Gay Psychiatric Hospital). Estimates for the 30 public medical stations is 750 Kg , whereas approximately 420 Kg is generated by the six (6) health centers and a further 400 kg by private healthcare facilities.

I. Main Outcomes

3. Objective of the Consultancy

To improve the management of medical waste and minimize risk to health care workers and the public, during project implementation the national health care waste management plan will be further developed and formalized in the form of a Health Care Waste Management System (HWMS). These Terms of Reference lay out the scope, activities and deliverables for development of the

HWMS, which will be consistent with WBG Environmental Health and Safety Guidelines for Health Care Facilities.¹⁰ The HWMS will be adequate to the scale and type of activities and identified hazards for the country and will be implemented and operated by the Ministry of Health, Social security and International Business in collaboration as necessary with key stakeholder organizations.

4. Scope of Work

The scope of work includes conducting a preliminary evaluation and verification of current health care waste management, identifying infrastructure and capacity needs, developing written protocols and procedures for health care waste management, and providing training and outreach.

Task 1 – Evaluate current health care waste management

The first task is to establish baseline information on the current status of health care waste management. Data on the number and type of generators, volumes and types of wastes for various facilities, number and registration of transporters, status of landfill operations, functioning of bioclave, etc. will be generated by the consultant based on interviews and field visits. Any emissions to air, water or soil must be considered, as well as compliance with national law and best practice.

With regards to health care worker protection and community health and safety, the Consultant will assess current practice for occupational health and safety, including training, use of protective equipment, isolation and segregation of wastes, and other factors that could affect exposure to infections or diseases, exposure to wastes or hazardous materials, radiation, and fire safety.

Task 2 – Identify infrastructure and capacity needs

The Consultant will review the inventory to be prepared by the Ministry of Health, Social security and International Business of the capacity, condition, and needs of the primary health care facilities. Combining this with the Task 1 results, the Consultant will evaluate the adequacy of the existing physical infrastructure available in primary health care facilities and associated facilities in terms of location and size of areas where wastes are stored, temperature and condition of wastes, segregation and isolation of wastes. In addition evaluate liquid waste disposal practices such as type of disposal system (septic tank, leach field, cesspool, sewer system, package treatment plant), types of wastes expected, whether chlorination is needed, and level of treatment. The consultant will also

¹⁰ http://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/sustainability-at-ifc/policies-standards/ehs-guidelines

evaluate level of training and capacity of health care workers, landfill workers, and waste transporters. Based on the evaluation, the consultant will provide recommendations for physical and capacity improvements.

Task 3 – Develop Protocols and Procedures

The consultant will prepare a formal set of protocols and procedures that will constitute the HWMS to be implemented by the Ministry of Health, Social Security and International Business. The HWMS will integrate the following:

- WBG EHS Guidelines for Health Care Facilities³
- WHO guidelines for management of solid health care waste at Primary Health Care Facilities¹¹

The HWMS procedures must address waste minimization, reuse and recycling; waste segregation; on-site handling, collection, transport and storage; transport to external facilities; and, treatment and disposal. The HWMS shall be prepared in collaboration with the Ministry of Health, Social Security and International Business and subject to their review and approval.

The roles, responsibilities and duties of Health, Social Security and International Business and health care facility operators will be included, and an assessment made of capacity gaps to implement the program, with corresponding recommendations for training and capacity building.

Task 4. Provide training and outreach

The Consultant will prepare a presentation on the results of Tasks 1-3 and deliver it to Health, Social Security and International Business as part of a one-day workshop/seminar, which will include training and instruction on the HWMS. All training materials will be provided to the Ministry of Health, Social Security and International Business subsequent delivery to each of the 33 primary health care facilities in the country.

5. Reporting Requirements and Deliverables

¹¹ http://www.who.int/water_sanitation_health/publications/manhcwm.pdf

The consultant will report to the Health, Social Security and International Business designated contact person. Shortly after the Consultant has mobilized his/her resources and after having met the staff of the Ministry of Health, Social Security and International Business and visited key project sites, the consultant will present a brief inception report and work plan to ensure that both parties (the Consultant and Ministry of Health, Social Security and International Business are in agreement that the assignment will be carried out as planned and as stipulated in the contract. The inception report will incorporate a work plan for the development of the different activities and deliverables.

Each of Tasks 1-4 will also have a specific deliverable, as follows:

- Task 1 Report - Findings of the assessment of current practice
- Task 2 Report – Recommendations for infrastructure and capacity
- Task 3 Report – HWMS
- Task 4 – Presentations and Training Materials

Each of the deliverables shall be provided in Draft form, to which Ministry of Health, Social Security and International Business will revert comments within 2 weeks. The Final versions of each deliverable will then be provided taking into account and addressing the comments provided.

6. Logistics and Timing

The assignment is anticipated to last for a period of 14 weeks, or three to four months, as per the following tentative schedule:

Task	Duration (weeks)
Inception Report	2
1	4
2	2
3	4
4	2

The Consultant shall ensure that he/she is adequately supported and equipped in terms of personal technical equipment (transportation, laptop, software and field tools),

The MOHW will arrange and coordinate access, arrange requested interviews, provide reports and respond promptly to data requests to facilitate the assignment. The MOHW will provide comments to Draft deliverables within two weeks of receipt.

7. Qualifications

The Consultant or Firm must have at least 5 years of experience in the field of environmental assessment, environmental management, or environmental supervision, with direct and relevant project experience in medical waste planning and/or management. Experience in the Caribbean, is a benefit. Facility in the English language is required.

Appendix 3 Consultation and Public Disclosure

1. Consultation

Type of consultation held	Description, location, and Date	Feedback received, and responses given
In person meetings National Disaster Management Agency (NaDMA) – St. David South Committee	Presentation by Camille St. Louis-Planner (Ag.) at meeting held by the St. David's South, NaDMA Parish Committee Meeting, May 13, 2019, at the Wester hall, Secondary School	The attendees were generally interested in the project but expressed some concern regarding staffing for the facility to ensure the planned services can be provided. Ministry noted this concern, and indicated that work is on-going to strengthen all aspects of the system, and the planned nurses quarters at the facility is designed to address the issues of staffing, as it will provide a place for the nurse to reside and so be available to the community in a timely manner and especially in the event of an emergency. Another area of concern ensuring adequate resources were available to resound in an emergency. In this regard, MOH noted the Emergency Health Response System was being developed as a component of the project and that provisions could be made through this initiative to equip beneficiary facilities with the resources and equipment to respond to hazard events.

Online Draft ESMF posted on Government of Grenada website and the Website of the Ministry of Health, Social security and International Business	Posted May 30, 2019	
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2. Public Disclosure

The final ESMP will be published online on the websites hosted by the Government of Grenada and the Ministry of Health, Social Security and International Business.



Figure 1: Cross-section of Participants- St. David Health Center Consultation /Westerhall Secondary School



Figure 2 Presentation by Ministry of Health Representative

Appendix 4 Sample Monitoring Checklist to be used by the Contractor and the Supervising Engineering Consultant (SEC) during construction phase

		Checklist response - Week- Month/Year									
Activities		Monitoring requirements /Inspection items	Frequency* (Contractor/SEC)	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Evidence required
1	Screening, safeguarding, Approval and disclosure process	<ul style="list-style-type: none"> Number of sub-projects that have been screened and categorized Number of sub-projects requiring and ESMPs Number of sub-projects needing simple measures Number of ESMPs prepared Number of ESMPs implemented Number of sub-projects implemented needing correctives actions/mitigation measures 	During implementation								Review, approval, as needed, disclosure documents. Reporting
2	Demolition and/or excavation waste	<p>Please indicate the status of the waste container(s), whether they are full, half full, or empty. Please provide photo evidence of the site.</p> <p>Please rate the cleanliness of the site from 1 to 3 (1 indicates no accumulation and 3 indicates "random accumulation across many areas of the site". Please provide photo evidence of the site.</p> <p>Did you obtain a proof for the waste collection? Please keep receipt as record</p> <p>Is waste disposal proof checked and copy archived? Please keep receipt as record</p>	Daily/weekly Daily/weekly Upon collection/weekly Upon disposal/weekly	Fu ll 1 X	Full 1 X	Three weekly Photos of different dates Three weekly Photos of different dates Record of collection receipt Record of disposal receipt					
3	Hazardous waste and materials	<p>Please indicate the status of the waste container(s), whether they are full, half full, or empty. Please provide photo evidence of the site. Are there any uncontained or unproperly disposed hazardous wastes? Please provide photo evidence of the site.</p> <p>Please rate the cleanliness and organization of hazardous chemicals' storage</p>	Daily/weekly Daily/weekly Daily/weekly	Fu ll Fu ll Fu ll	Full 1	Three weekly Photos of different dates Three weekly Photos of different dates					

	management	<p>and containers of the site from 1 to 3 (1 indicates "Clean, organized and no accumulation" and 3 indicates "random accumulation across many areas of the site". Please provide photo evidence.</p> <p>Did you obtain a proof for the waste collection? Please keep receipt as record</p> <p>Is waste disposal proof checked and copy archived? Please keep receipt as record</p>	<p>Upon collection/weekly Upon disposal/weekly</p>	1 1 1 1 1 1	Three weekly Photos of different dates Record of collection receipt Record of disposal receipt
4	Noise	<p>Does the work schedule comprise of machinery/equipment associated with high noise emissions (more than 70 dBA at source)? Please indicate number of noise complaints received - Please update the Complaints Register/ Record with the new complaints received Is PPE made available?</p> <p>Is PPE used? Please provide photo.</p> <p>.</p>	<p>Daily/weekly Daily/weekly Daily/weekly Daily/weekly</p>	- - - -	Record of complaints Three weekly Photos of different dates
5	Dust	<p>Does the work schedule comprise of machinery/equipment associated with high dust emissions?</p> <p>Please indicate number of dust complaints received- Please update the Complaints Register/ Record with the new complaints received Are dust wetting procedures being applied? Please provide photo evidence of the site.</p> <p>Is PPE made available?</p> <p>Is PPE used during dusty conditions? Please provide photo evidence of the site.</p>	<p>Daily/weekly Daily/weekly Daily/weekly Daily/weekly Daily/weekly</p>	X X X X X	Record of complaints Three weekly Photos of different dates Three weekly Photos of different dates
6	Paints	<p>Is the type of paint purchased from a reputable/known brand? Please keep receipt as record What is the amount of Paint purchased? Please keep receipt as record</p> <p>Do the types of paint purchased contain harmful chemicals (such as)? Please keep MSDS as a record</p> <p>Is PPE made available?</p>	<p>monthly/monthly monthly/monthly Daily/weekly Daily/weekly Daily/weekly</p>	- - - X X X X X X X X X	Record of purchase receipt Record of purchase receipt Record of MSDS Three weekly Photos of different dates

		Is PPE used during paint works? Please provide photo evidence of the site.								
7	Asbestos	<p>is Asbestos waste being contained according to the Asbestos management plan? Please provide photo evidence of the site. Is PPE made available?</p> <p>Is PPE used during Asbestos exposure? Please provide photo evidence of the site.</p> <p>Did you obtain a proof f for the waste collection? Please keep receipt as record</p> <p>Is waste disposal l proof checked and copy archived? Please keep receipt as record</p>	Daily/weekly Daily/weekly Daily/weekly Upon collect ion/weekly Upon disposal/weekly	X X X X X X X X X X	X X X X X X X X X X	X X X X X X X X X X	X X X X X X X X X X	X X X X X X X X X X	X X X X X X X X X X	Three weekly Photos of different dates Three weekly Photos of different dates Record of collection receipt Record of disposal receipt
8	Physical hazards from demolition waste, equipment and vehicles	<p>Please indicate the number of injuries/incidents - Please update the Incident Log</p> <p>Please indicate the number of complaints received/ incidents - Please update the Complaints Register with the new complaints received</p> <p>Driver and operator t testing report checked? Please keep a copy of the testing reports</p> <p>Driver and operator training report checked? Please keep a copy of the training reports</p> <p>Have you reviewed and confirmed exclusion zones? Copy of the sit e layout indicating all exclusion zones</p>	Daily/weekly Daily/weekly monthly/monthly monthly/monthly Daily/weekly							Incident Log Complaints Register Copy of the testing report Copy of the training reports Site layout with exclusion zones
9	Fire hazards	<p>Are the fire extinguishing instruments checked? Please complete relevant log</p> <p>Have you checked flammable material containers & storage? Please provide photo evidence Plea se indicate number of injuries & incidents - Please update the Incident Log</p>	weekly/ weekly weekly/weekly Daily/weekly							

10	Other occupational health & safety (Slippage and Falling - Working at heights - manual handling & lifting - electrocution - Exposure to biological hazards)	Is the approved occupational health and safety plan being applied? Please indicate number of accidents and near-misses. Please keep an updated log	Daily/weekly Daily/weekly	X	X	X	X	X	X	X	EHS approved plan and monitoring checklist Accident Log	
11	Worker influx	Please indicate the number of complaints received/ incidents - Please update the Complaints Register with the new complaints received	Daily/weekly								Complaints register	
12	Traffic & accessibility	Please indicate the number of complaints received/ incidents - Please update the Complaints Register with the new complaints received	Daily/weekly								Complaints register	
13	waste burning	- Please indicate the number of complaints received/ incidents - Please update the Complaints Register with the new complaints received	weekly Daily/weekly	X				X	X		Photo evidence Complaints register	
14	Equipment on-site fueling	Have you checked the integrity of the impervious layer for the onsite fueling activities? Please provide photo evidence of the site	weekly Daily/weekly								Photo evidence	
15	Utility damage	Please indicate the number of complaints received/ incidents - Please update the Complaints Register with the new complaints received	Daily/weekly								Complaints register	
16	Chance finds ESMF – Transfer	Have you prohibited the use of equipment associated with high vibration close to the chance-find site? Please provide a copy of the procedure	Daily/weekly								Copy of the procedure	
		Have you reviewed permitting procedures? Please provide a copy of the permits	Daily/weekly								Copy of the permits	
		Has a guard been assigned to secure the chance find area?	Daily/weekly								Photo evidence	

	Please provide a photo evidence of the site												
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